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TRANSCRIPT OF RECORD

Supreme Court of the United States

OCTOBER TERM, 1935

No. 178

GREAT NORTHERN RAILWAY COMPANY,
PETITIONER,

vs.

J. J. WEEKS, STATE TAX COMMISSIONER, ET AL.,
ETC.

ON WRIT OF CERTIORARI TO THE UNITED STATES CIRCUIT COURT OF APPEALS FOR THE EIGHTH CIRCUIT.

PETITION FOR CERTIORARI FILED JUNE 26, 1935.

CERTIORARI GRANTED OCTOBER 14, 1935.

United States Circuit Court of Appeals

EIGHTH CIRCUIT.

No. 10,221

IN EQUITY.

GREAT NORTHERN RAILWAY COMPANY, APPELLANT,

vs.

J. J. WEEKS, STATE TAX COMMISSIONER, ET AL., APPELLEES.

APPEAL FROM THE DISTRICT COURT OF THE UNITED STATES FOR THE DISTRICT OF NORTH DAKOTA.

FILED JANUARY 10, 1935.

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1 Great Northern Railway Company, Plaintiff,

vs.

J. J. Weeks, State Tax Commissioner, J. M. Baillie as Auditor and L. T. Halvorson as Treasurer of Barnes County; G. A. Gilbertson as Auditor and W. D. Conway as Treasurer of Benson County; Ole Colbornson as Auditor and Sam H. Wilson as Treasurer of Bottineau County; H. F. Magedanz as Auditor and Jerry Donovan as Treasurer of Burke County; F. Ford Doherty as Auditor and C. A. Baumgartner as Treasurer of Cass County; Otto Rasmusson as Auditor and A. A. Wilson as Treasurer of Cavalier County; John A. Dawe as Auditor and H. J. Oberman as Treasurer of Dickey County; R. H. Lynch as Auditor and O. A. Steffler as Treasurer of Divide County; S. W. Lyman as Auditor and Hugh Peoples as Treasurer of Eddy County; J. B. McWethy as Auditor and M. P. Roberts as Treasurer of Foster County; Martin O. Haugen as Auditor and John Sandbek as Treasurer of Grand Forks County; P. A. Melgard as Auditor and R. J. Howden as Treasurer of Griggs County; E. W. Olson as Auditor and Oscar R. Fisher as Treasurer of McHenry County; Arne Tollefson as Auditor and Oluf Erickson as Treasurer of McKenzie County; F. J. Haines as Auditor and Nels Hofland as Treasurer of Mountrail County; Peter Jorgenson as Auditor and J. J. Schindele as Treasurer of Nelson County; Wm. W. Felson as Auditor and J. H. Hannesson as Treasurer of Pembina County; O. A. Spillum as Auditor and O. T. Tofsrud as Treasurer of Pierce County; J. O. Peterson as Auditor and F. J. Burckhard as Treasurer of Ramsey County; C. E. Colcord as Auditor and W. C. Budke as Treasurer of Renville County; George J. Fischer as Auditor and Karl L. Mikkelson as Treasurer of Richland County; Jas. H. Penny as Auditor and Allister McKay as Treasurer of Rolette County; R. W. Safstrom as Auditor and H. O. Webster as Treasurer of Sargent County; G. H. Mustad as Au-

ditor and Florence Carlson as Treasurer of Steele County; A. T. Mooney as Auditor and John Gang as Treasurer of Towner County; Gerhard D. Olson as Auditor and Thomas P. Strand as Treasurer of Traill County; W. J. LaMarre as Auditor and Benj. A. Gudajtes as Treasurer of Walsh County; A. G. Torgerson as Auditor and Bert A. Balerud as Treasurer of Ward County; Otto G. Krueger as Auditor and Edith Darcy as Treasurer of Wells County; Morten Mortensen as Auditor and Oscar N. Lee as Treasurer of Williams County, all of the State of North Dakota, Defendants.

2 Pleas before the Honorable Andrew Miller, Judge of the United States District Court for the District of North Dakota, at the December, 1933, term of said Court:

Be It Remembered that on the 15th day of February, 1934, a bill of complaint was filed in this cause, which bill of complaint is in words and figures following, to-wit:

3 Bill of Complaint.

To the Honorable Judge of the District Court of the United States for the District of North Dakota:

Plaintiff complains of the above named defendants and alleges that:

I.

Plaintiff is a corporation organized under the laws of the State of Minnesota and now operates and for many years past has operated a railroad extending from St. Paul and Duluth, Minnesota, and Superior, Wisconsin, through the States of Minnesota, North Dakota, South Dakota, Iowa, Montana, Idaho, Washington and Oregon and into the State of California and the Dominion of Canada and lines running into or through thirty counties in North Dakota. Its head office and principal place of business is at St. Paul, Minnesota. It is and has been engaged mainly in foreign commerce and commerce among the states as a common carrier of freight and passengers by said railroad and to a lesser extent in the transportation wholly within each of the states above named including the State of North Dakota. Its lines of railroad within North Dakota extend into the counties of Barnes, Benson, Bottineau, Burke, Cass, Cavalier, Dickey, Divide, Eddy, Foster, Grand Forks, Griggs, McHenry, McKenzie, Mountrail, Nelson, Pembina, Pierce, Ramsey, Renville, Richland, Rolette, Sargent, Steele, Towner, Traill, Walsh, Ward, Wells, and Williams.

4 II.

Defendants are citizens and residents of the State of North Dakota and hold the offices severally designated in the caption hereof. The county officers named in said caption are charged with the duty of enforcing taxes in their respective counties, based upon assessment made by the State Board of Equalization in North Dakota against plaintiff's property. Defendant J. J. Weeks as State Tax Commissioner is charged with the duty of enforcing collection of said taxes in the event of failure of said county officers to collect the same.

III.

This suit arises under the Constitution and Laws of the United States and involves, exclusive of interest and costs, a sum or value in excess of $600,000; and involves a sum or value in excess of $3,000.00 with respect to each of the counties above named into which plaintiff's lines of railroad extend. It is brought to enjoin the collection of taxes for the year 1933 assessed against the railroad properties of the plaintiff, which taxes the plaintiff claims have been levied and assessed contrary to the Constitution and Laws of the State of North Dakota; and also in violation of the Constitution of the United States in that the said assessment and levy take property without due process of law and impose an arbitrary and unreasonable burden upon commerce among the states and foreign nations.

5 IV.

The Constitution and Statutes of North Dakota in effect now and at all times herein mentioned, contained the following provisions:

Section 176 of the Constitution, as amended by Articles 20 and 29 of Amendments thereto:

"Taxes shall be uniform upon the same class of property including franchises within the territorial limits of the authority levying the tax * * *."

Section 179 of the Constitution, as amended by Articles 20 and 44 of Amendments:

"* * * The property, including franchises of all railroads operated in this state * * * used directly or indirectly in the carrying of persons, property or messages, shall be assessed by the State Board of Equalization in a manner prescribed by such state board or commission as may be provided by law."

Section 2122, Supplement to the 1913 Compiled Laws, 1913-1925:

"All property subject to taxation, shall be assessed at its true and full value in money."

Section 2141 of Supplement to the 1913 Compiled Laws of North Dakota, 1913-1925:

"The governor, state treasurer, state auditor, commissioner of agriculture and labor and the state tax commissioner shall constitute the state board of equalization."

Section 2242, Compiled Laws of 1913:

"The State Board of Equalization shall at its annual meeting in August in each year, assess at its actual value the franchise, roadway, roadbed, rails and rolling
6 stock of all railroads operated in this state. * * * To enable said Board to make a correct valuation of such property, they shall have access to all reports, estimates and surveys of such lines of railroads as may be on file in the office of the Commissioners of Railroads and shall have power to summon and compel the attendance of witnesses, and may examine such witnesses under oath in any matter relating to the value of such property. In estimating the value of such railroads, branches and sidetracks thereof they shall be governed by the same rules as are provided for the government of county and township assessors in valuing other property in this state. * * *"

Section 2243, Compiled Laws of North Dakota 1913:

"The board of equalization shall divide the valuation so found and determined of each continuous line by the number of miles of such line contained in the state, and the result shall be the valuation per mile for which said line shall be assessed. The value of each branch line shall be determined in the same manner, and such valuation per mile shall be apportioned to each county according to the number of miles of such line or branch line contained in such county."

Section 2244, Compiled Laws of North Dakota 1913:

"The state auditor shall at the time of certifying the equalized value of each organized county to the county auditor, also certify the number of miles of each main line of railroad, and branches and sidetracks thereof contained in said county and the valuation per mile of such line or branch line as determined by the state board of equalization and the county auditor of such county shall apportion such valua-

tion to the cities, towns, townships and districts
7 through which such railroads run according to the number of miles contained in each, as a part of the valuation of such city, town, township and district for the purpose of taxation, and the same shall be taxed as personal property is taxed in each county."

Initiated Measure, approved June 9, 1932 (Laws of North Dakota 1933, p. 493), provides that all property, real, personal and mixed, subject to a general property tax, shall be valued and assessed at fifty per cent of its full and true value, and provides further that assessors shall assess and return all taxable property at its full and true value and makes it the duty of the county auditor of each county, after equalization by the State Board of Equalization, to make the computations necessary to reduce such assessed value to said fifty per cent.

V.

Under the statutes, it is the duty of the State Board of Equalization to equalize the assessment of all property in the several counties assessed by the local authorities so that all taxable property in the state, whether assessed by the State Board of Equalization or by local authorities, shall be assessed uniformly according to its true and full value in money. After equalization of the assessment upon all of the taxable property in the state, it is the duty of said State Board of Equalization to certify to each county auditor the equalized value placed upon all taxable property within each county.

8

VI.

In compliance with statutory requirements plaintiff has for many years, including 1933, furnished to the State Tax Commissioner data relating to its assets and liabilities, value of property, earnings, operating and other expenses, and taxes paid, and such other information as said Tax Commissioner has required for the purpose of determining what its annual assessment should lawfully be.

VII.

For the year 1933, the State Board of Equalization made a purported assessment for plaintiff's railway property fixing the value thereof within the State of North Dakota at $78,832,888, whereas the actual true and full value in money of plaintiff's property was at the date of said assessment not more than $45,000,000. The said assessment was certified out to the several county auditors above named in the amounts

shown in column 1 of the following table. Each county auditor then determined a "taxable value" for all property in his county, including railroad property, at 50% of its full assessed value, as required by law, and levied a tax against said "taxable value" of plaintiff's property in his county in the amounts shown in column 2 of the following table:

9

County	#1 Full Assessed Valuation	#2 Amount of Tax
Barnes	$ 468,980	$ 7,374.99
Benson	2,574,340	46,952.38
Bottineau	3,380,454	64,754.57
Burke	2,202,746	49,232.69
Cass	7,267,462	119,169.21
Cavalier	2,717,244	52,766.38
Dickey	1,331,054	18,562.18
Divide	595,142	15,895.42
Eddy	1,174,822	19,402.39
Foster	954,604	17,558.54
Grand Forks	5,835,018	96,748.24
Griggs	1,277,488	19,794.24
McHenry	5,341,896	96,880.90
McKenzie	1,207,052	34,947.64
Mountrail	3,577,890	86,958.10
Nelson	2,796,942	56,977.22
Pembina	2,427,188	44,155.49
Pierce	2,844,164	49,662.10
Ramsey	3,842,468	69,629.17
Renville	909,540	21,658.34
Richland	2,548,746	41,434.53
Rolette	1,449,688	29,087.64
Sargent	1,572,494	28,170.26
Steele	1,348,932	28,353.90
Towner	1,125,532	16,831.84
Traill	3,513,838	53,620.38
Walsh	2,303,334	45,517.70
Ward	4,433,170	95,895.92
Wells	1,233,688	18,532.24
Williams	6,546,972	161,827.74
Total	$78,832,888	$1,508,352.34

10 By reason of the over-assessment hereinafter described, 43% of each of said tax levies is excessive and unlawful, and the maximum tax which could lawfully have been levied upon plaintiff's property in each of said counties does not exceed 57% of the said respective tax levies.

VIII.

Plaintiff's property in North Dakota has no going concern or earnings value whatever except for operation in

connection with the balance of plaintiff's railroad system, 92% of the traffic handled over it is interstate traffic and only 8% is traffic moving wholly within the state of North Dakota. If operated independently and without connection with the balance of said system, the said property in North Dakota would be unable to earn its expenses of operation and would have no money value whatever except such amount as could be obtained by salvaging and selling its materials and right of way and such value would not exceed ten or fifteen per cent of the amount assessed. Its only value in excess of said salvage value is and has been its going concern or revenue producing value derived from its operation as a part of plaintiff's railroad system.

The value of plaintiff's property in North Dakota can only be determined either by first determining the value of its entire system and then allocating a proper proportion thereof to the property in North Dakota, or else by determining the net earnings from all traffic moving over said lines in North Dakota and capitalizing such net earnings. Such net earnings can only be determined by adding to the revenues from intrastate traffic moving over said
11 lines, a proper proportion of the revenues from interstate traffic moving partly over said lines and deducting the cost of moving such traffic.

IX.

The assessments of plaintiff's property in North Dakota for 1933 and for many years immediately preceding were the result in effect of assessing in North Dakota properties and values actually located in other states, and of over valuing plaintiff's railroad system. For the year 1932 and many preceding years, the assessing authorities of North Dakota determined a value for plaintiff's railroad system by capitalizing its average yearly net earnings or income for various past periods at various rates of percentage and by averaging the value thus obtained with the average value of plaintiff's stocks and bonds as determined by their average selling price for various preceding periods, certain amounts being deducted from said stock and bond value as representing the value of property and securities owned by plaintiff but not constituting a part of its railway system. Said assessing authorities then allocated to North Dakota as the value of plaintiff's property in North Dakota a portion of said system value equal to the average proportion which certain figures for North Dakota bore to the corresponding figures for plaintiff's entire railroad system. The figures used in determining said proportions were the following:

(1) Miles of all track.

(2) Amount of physical property as measured by cost of reproduction less depreciation.

(3) Cars and locomotives moved one mile.

12 (4) Tons of freight and passengers moved one mile.

(5) Gross earnings, the gross earnings in North Dakota being computed by adding to the revenues in North Dakota from intrastate traffic a proportion of the revenue from all interstate traffic passing into or through North Dakota equal to the proportion which the miles of track in North Dakota used for moving such traffic bore to the total miles of track used for moving such traffic.

X.

In the year 1932, the State Tax Commissioner submitted a report to the Board of Equalization computing value for plaintiff's property in North Dakota by the method above outlined at $76,115,715; he also made an allocation of the same system value to North Dakota by a so-called "alternative method", using for the purpose of allocation, only the factors numbered 3, 4 and 5 in the above list, and thereby computed a value for plaintiff's property in North Dakota of $79,417,825. The Board thereupon assessed plaintiff's property in North Dakota at $78,850,024 for 1932. Similar computations made for 1933 would have produced values of $62,949,425 and $65,695,310 respectively, but said Board of Equalization, as plaintiff is informed and believes, made no computation of the value of plaintiff's property in North Dakota for 1933 but instead adopted the 1932 assessment as and for its 1933 assessment and made no deduction or decrease whatever except $17,136 which was due to the removal of a small amount of plaintiff's trackage in North Dakota. The assessment
13 per mile remained the same as for 1932 and the total assessment for 1933 was $78,832,888.

XI.

Plaintiff alleges that the values of its railroad system as computed by the assessing authorities of North Dakota as aforesaid were excessive because the amounts deducted from stock and bond values as the value of plaintiff's properties and securities not forming a part of its railroad system were inadequate and less than the full values of such properties and securities, and because plaintiff's net earnings were capitalized at an inadequate rate per cent; and in the years 1931, 1932 and 1933 said system values as so computed were par-

ticularly excessive because undue weight was given to earnings and stock and bond values during the years 1928 and 1929. Abnormally active business conditions in 1928 and 1929 had produced high earnings and high stock and bond values in those years. Said business and economic conditions had disappeared in the later years and plaintiff's current and prospective earning power and stock and bond values had greatly decreased so that the weight given to figures as of 1928 and 1929 by said assessing authorities was excessive. This is particularly true in the case of stock and bond values. The current prices of stocks and bonds reflect the judgment of investors as to the weight to be given to all past as well as current earnings, and current prices reflect past as well as present experience. To average current stock and bond prices and the prices for past periods gave double weight to past conditions and unduly increased the amounts computed as the plaintiff's system values.

14 XII.

At all of the times herein mentioned, the use of the factors numbered 1, 3, 4 and 5 in the list set forth in paragraph IX hereof, or any of them, in allocating the value of plaintiff's system to North Dakota have resulted in assessing and taxing in North Dakota property owned by plaintiff and located in other states and in an unlawfully and unreasonably high allocation of plaintiff's system value to North Dakota and in a gross over-valuation and over-assessment of plaintiff's property in North Dakota.

North Dakota is a comparatively level prairie state of relatively cheap railroad construction and without expensive terminals whereas the balance of plaintiff's system includes all of its larger and more expensive terminals and lies largely in mountain topography requiring extensive cuts and embankments, tunnels, bridges, snow-sheds and other relatively expensive construction. Branch lines constitute 61% of plaintiff's mileage in North Dakota and only 45% on the balance of its system. The average mile of line in the plaintiff's system outside of North Dakota contained approximately 66 2/3% more physical property and would be approximately 66 2/3% more expensive to build than the average mile of plaintiff's line in North Dakota. The average mile of plaintiff's line in North Dakota includes less grading and embankment, less bridges, tunnels and snow protection, less terminal property and 40% less total physical property than the average mile on the balance of the plaintiff's system. The average cost of reproduction less depreciation per mile of plain-

tiff's railroad line in North Dakota as determined by
15 the Interstate Commerce Commission, plus the cost of additions and improvements to December 31, 1932, was only 54.83% as great as that for the balance of the system outside of North Dakota.

XIII.

The average mile of plaintiff's road in North Dakota is also less valuable from the standpoint of traffic density and earnings, and traffic production than the average mile on the balance of plaintiff's system. The ton miles of freight carried per mile of road operated for North Dakota and for the balance of plaintiff's system for the years 1930, 1931 and 1932 were as follows:

	State of North Dakota	Balance of System
1930	827,509	1,111,017
1931	609,544	777,063
1932	474,715	528,297

The tons of freight originating per mile of road operated for plaintiff's lines in North Dakota and for the balance of its system for the years 1930, 1931 and 1932 were as follows:

	State of North Dakota	Balance of System
1930	1,204	3,689
1931	835	2,117
1932	645	990

XIV.

The use of the proportion of miles of road or track as an allocation factor for North Dakota is an exceedingly inaccurate and excessive measure of physical property in
16 the case of the plaintiff's railroad system for the reason that some miles contain many times as much physical property as others and in general, miles of plaintiff's road outside of North Dakota contain much more physical property than the average mile of road in the state.

The use of the proportion of tons of freight or passengers moved one mile or of cars or locomotives moved one mile as an allocation factor for North Dakota is exceedingly inaccurate and excessive as a measure of earnings or of service performed, because such a movement on the average in North Dakota involves the use of less property and indicates less service and less earnings than a similar movement over an average mile of plaintiff's track outside of North Dakota.

Rates for the movement of through traffic are in general established on a basis sufficient to pay the total operating expenses of the movement plus a return on the investment in the property required to make the movement. Where the movement in a particular state, because of mountain location or extensive terminals, requires more than average operating expenses and more than average investment, some addition must be made to the through rate in order to cover such excess. A mileage prorate of the through charge, therefore, credited to North Dakota, which is a state of cheaper than average construction and operation, a portion of the revenues collected for service actually performed in states of more expensive construction and operation.

17

XV.

The value of plaintiff's railroad system had greatly decreased between the date of assessment in 1932 and the corresponding date in 1933. The net earnings of plaintiff's railroad system for the year 1931, the last calendar year preceding the 1932 assessment were $12,669,420, while for 1932, the last calendar year preceding the 1933 assessment, they had decreased to $1,290,551. The average annual net earnings of the system for the three calendar years and for the five calendar years, respectively, preceding each date of assessment were as follows:

	3 Year Period	5 Year Period
Preceding the 1932 assessment	$22,346,483	$25,507,212
Preceding the 1933 assessment	$11,957,493	$19,924,814

The total value of plaintiff's stocks and bonds as represented by their average selling price was $461,845,051.00 for the calendar year preceding the 1932 assessment, $296,301,177 for the calendar year preceding the 1933 assessment, and $229,[illegible]35,500 as of the date of assessment, all without any deductions for the value of properties and securities not forming a part of plaintiff's railroad system.

A computation of the value of plaintiff's property in North Dakota for 1933 by the methods used in 1932 and previous years as above described would have produced an assessment of plaintiff's property in North Dakota approximately fifteen million dollars less than the said assessment

18 actually made by the State Board of Equalization. In making its said assessment for 1933, the said State Board of Equalization not only failed to correct the said excessive factors of allocation but in effect applied them to a

system value as of the preceding year and failed to make any reduction whatever because of the reduction in the value of plaintiff's railroad system.

XVI.

The cost of reproduction less depreciation of plaintiff's system as of December 31, 1932, was $564,608,688. Plaintiff has always been and will continue to be entirely unable to earn any fair rate of return on said sum and will be unable to earn a fair rate of return on any sum in excess of $332,080,233. Plaintiff's actual system value in money is not more than said last named sum and is, therefor, not more than 58.82% of its cost of reproduction less depreciation. The full assessed value of plaintiff's property for 1933 in all of the other states in which any part of its line is located and which make ad valorem assessments is 52.32% of the cost of reproduction less depreciation of the property in those states while the assessment in North Dakota herein complained of is 100.82% of the cost of reproduction less depreciation of the said property in North Dakota.

XVII.

Plaintiff's system value as of the 1933 assessment date was at least $74,752,867 less than as of the 1932 assessment date, so that the use of the 1932 system value in 1933 would produce an excess of $74,752,867 in the system value for 1933.

19 Approximately 18.86% of this excess in system value was allocated to North Dakota in the 1933 assessment and resulted in an over-valuation in North Dakota of $14,098,390. The proportion of plaintiff's system value actually located in North Dakota was not more than 13½%, whereas, due to the use of said exaggerated and erroneous factors of allocation, approximately 18.86% or an excess of 5.36% was allocated to North Dakota for 1933. This produced an additional over-assessment of $18,397,433, making a total over-assessment of more than $32,000,000. This over-assessment resulted in a levy of more than $600,000 of taxes in excess of the amounts which could lawfully have been levied.

XVIII.

At all of the times herein mentioned and particularly at the time of making the said assessment for 1933 herein complained of, the said Board of Equalization was fully advised of and entirely familiar with all of the facts above allleged; and notwithstanding this it had deliberately, intentionally and continuously ignored all of said facts and deliberately,

knowingly, intentionally and continuously over-valued and over-assessed plaintiff's property by many millions of dollars and allocated a grossly excessive proportion thereof to the state of North Dakota and assessed plaintiff's property in North Dakota on account of values of property located in other states in the amount of many millions of dollars, all with the deliberate purpose and intent of defrauding plaintiff and requiring it to pay taxes not lawfully due in the amount of several hundred thousand dollars per year. In making its assessment of plaintiff's property for 1933, the said Board of Equalization acted without any logical
20 process of reasoning or basis of fact and adopted a valuation for plaintiff's property in North Dakota grossly in excess of any valuation or assessment which could be determined by any known, recognized, accepted, usual or reasonable method and made its assessment arbitrarily and without reference to or consideration of the actual value in money of plaintiff's property in North Dakota.

XIX.

All other property subject to assessment and taxation in North Dakota is required to be assessed at its true and full value in money and plaintiff alleges upon information and belief that at all times herein mentioned, all such other property was so assessed. The assessment actually made of plaintiff's property as aforesaid imposed upon it an unwarranted share of the tax burden of the state and materially discriminated against plaintiff as compared with other taxpayers and owners of other property.

The collection of said taxes would deprive plaintiff of property without due process of law and of the equal protection of the law, contrary to the provisions of the 14th Amendment to the Constitution of the United States and would improperly burden interstate commerce and obstruct plaintiff in the transportation of persons and property in interstate commerce in derogation of the power of Congress to regulate interstate commerce under the Constitution of the United States and in violation of the provisions of said Constitution.

21 XX.

The exaggeration and distortion in the allocation factors mentioned in paragraph IX hereof, as applied to plaintiff's railroad system can be removed and corrected only by some method which will give proper weight to the proportion of physical property, traffic and earnings in the state. This can be done by adding to the total revenues in North

Dakota from intrastate traffic, a proportion of earnings from interstate traffic moving into or through North Dakota equal to the proportion of property used in carrying such traffic and the cost of performing the service and then determining the net earnings for North Dakota by deducting from the gross revenues so determined the operating expenses incurred in moving the traffic. The proportion of net earnings in North Dakota to system net earnings will determine the proportion of plaintiff's system value in North Dakota, or a capitalization of the net earnings in North Dakota thus determined would determine the value of plaintiff's property in North Dakota.

XXI.

For the five calendar years preceding the date of the 1933 assessment the net earnings of plaintiff's railroad system had been as follows:

1928	$31,294,069
1929	$32,457,523
1930	$21,912,508
1931	$12,669,420
1932	$ 1,290,551
Average for the last 3 years	$11,957,493
Five year average	$19,924,814

22 Plaintiff believes and alleges that the prospective earning power of plaintiff's railway system at the date of assessment did not exceed the sum of $12,000,000 per year which sum was far in excess of its then current earning power, and that a capitalization of said 5-year average earnings of $19,924,814, would greatly exceed its full system value.

The value of plaintiff's system as of the date of assessment can be determined by capitalizing said prospective earning power at that percentage rate which capital was then earning or might reasonably expect to earn in business undertakings of similar nature and security or risk, and which would be just sufficient to attract capital for similar investment, which rate plaintiff believes and alleges was not less than 7% per annum. Capitalizing plaintiff's said 5-year average earnings (which exceeded plaintiff's prospective earning power) at said rate would produce a system value on said date of assessment of $284,640,200, and capitalizing at the rate of 6%, which was generally used by the taxing authorities of North Dakota in previous years, and which plain-

tiff believes to be unduly low, would produce a system value on said date of assessment of not more than $332,080,233.

XXII.

The ownership of the plaintiff corporation at all times herein mentioned was divided into approximately 2,500,000 shares of capital stock and plaintiff's railroad system was subject to prior mortgage liens securing bonds of a face value of $353,143,515. Said stocks and bonds were
23 listed and extensively bought and sold on the New York Stock Exchange. At the date of assessment, plaintiff owned in addition to its railway system, other properties and securities not forming a part of its railway system or contributing to the earnings or value thereof. On the date of assessment, said other properties and securities had a value of not less than $176,147,986. Their value as computed by the State Tax Commissioner of North Dakota, in his 1932 report to the Board of Equalization was $165,-458,268.

The total value of plaintiff's stocks and bonds on the date of assessment was $229,485,500 as evidenced by the latest market sales thereof, $296,301,177 as evidenced by the average market price for a period of one year next preceding said date of assessment, and $379,073,114 as evidenced by average market prices for the last two years.

Deducting $165,458,268, the computation by the State Tax Commissioner as the value of plaintiff's said other property and securities, the total value of plaintiff's railway system alone on the date of assessment as indicated by the said market price of its stock and bonds was not more than $213,-614,846 according to the highest of the figures above quoted. Plaintiff believes and alleges that the full and true value in money of plaintiff's entire railroad system on date of assessment determined on the highest reasonable basis that could be used was much less than $332,080,233.

XXIII.

The average yearly net earnings from plaintiff's property in North Dakota determined in the manner set forth in paragraph XX above for the five calendar years
24 preceding the date of assessment in 1933 were not more than 13.5% of the total net earnings of plaintiff's railroad system. An allocation of a system value of $332,080,233 to North Dakota on said percentage produces a value for plaintiff's property in North Dakota on said assessment date of $44,830,831. Plaintiff believes and alleges

that the true and full value in money of its property in North Dakota on the date of assessment did not exceed $45,000,000.

XXIV.

Section 2156 of the Compiled Laws of North Dakota, 1913, provides that the county treasurer shall be the receiver and collector of all taxes extended upon the tax lists of the county levied for state, city, town, school, poor, bridge, road, or other purposes. Section 2244, Compiled Laws of North Dakota, 1913, provides that railroad property shall be taxed as personal property is taxed in each county. Section 2166, Compiled Laws of North Dakota, 1913, as amended by Chapter 241, Laws of 1929, provides that all personal property taxes shall become due on the 31st day of December in each and every year for which the tax was levied and if not paid become delinquent on the 1st day of March next after they become due and thereupon a penalty of 5% shall attach and be charged upon all delinquent taxes, and thenceforth there shall be charged interest at the rate of three-fourths of one per cent per month on the original amount of the tax until same is paid. The taxes assessed and levied against the plaintiff's property, described in this bill, are a lien against its property, prior and paramount to all other liens and a cloud upon its title. Under the law it is the duty of the defendant county treasurers to collect the taxes referred to, and if not paid on or before the fifteenth day of September, 1934, to certify the same to the sheriffs of the respective counties for collection by distraint and sale, and unless restrained by this Court, such proceedings will be taken. If the respective defendant county treasurers are permitted to proceed with the collection of said taxes and to certify the collection thereof to the sheriffs of the respective counties, such action will result in many vexatious proceedings resulting in great expense, loss, and embarrassment to the plaintiff and will impede the management and operation of plaintiff's business. Plaintiff has no adequate or complete remedy at law and it cannot obtain relief except in equity. Should plaintiff pay to the said several counties the taxes so levied, the plaintiff would have no remedy for the recovery thereof except by action against each of said counties and its officers. Such a procedure would involve the plaintiff and said several counties in a multiplicity of suits; and there would be involved in each of said suits the issue as to the percentage of the true and full value of plaintiff's property and other property at which the said Board of Equalization had assessed said property and other property in said state; and in order to avoid said multiplicity of suits

and a multiplicity of determinations of the issue as above stated, it is necessary that plaintiff secure relief in equity, and to that end plaintiff files this bill.

26 XXV.

Notwithstanding plaintiff's contention that not more than 57% of the amount of taxes levied in the respective counties as set forth in paragraph VII hereof are lawfully levied, plaintiff is willing and ready and hereby offers either to pay into the court for the benefit of said counties or to pay direct to the counties, 60% of the amount of taxes levied in the respective counties as aforesaid; and on or before March 1, 1934, plaintiff will tender each of said counties 60% of the taxes levied in such county.

Wherefore, and inasmuch as plaintiff is remediless by the strict rules of common law, and is only relievable in equity, plaintiff files this, its bill of complaint against said defendants, and prays:

That said defendants may be required to make full and true answer to this bill of complaint (but not under oath, answer under oath being expressly waived);

That 43% of the taxes so assessed and levied against plaintiff should be adjudged and decreed to be unequal, discriminatory, illegal and void and that the same be cancelled upon the records of said counties.

That the said defendants, their officers, agents, attorneys and any and all others acting or to act under, for or through them or by their direction, or in their behalf, may be perpetually enjoined and restrained from the collection of, or any attempt to collect, any of the said taxes levied against plaintiff by the taxing authorities of the state of North Dakota, because of such assessment of plaintiff's property by the State Board of Equalization in excess of 57% of the amounts levied; and that a temporary restraining
27 order be issued against the defendant county treasurers during the pendency of this action restraining them, and each of them, from proceeding to collect the said taxes in excess of said 57% or such other percentage as this court may determine;

That plaintiff may have such other and further relief as the nature of the case shall require, and to Your Honor shall seem meet, and may it please Your Honor to grant also to

plaintiff a writ of subpoena to be directed to said defendants, and each of them, commanding them, and each of them, to appear and make answer to plaintiff's bill of complaint at a certain time, and to abide the further order of the Court.

C. J. MURPHY,
T. A. TONER,
Grand Forks, N. D.,
Solicitors for Plaintiff.

F. G. Dorety,
J. P. Plunkett,
175 E. 4th St.,
St. Paul, Minn.
Of Counsel.

State of Minnesota,
County of Ramsey.—ss:

James T. Maher, being duly sworn, deposes and says that he is Right of Way, Land & Tax Commissioner of the Great Northern Railway Company, plaintiff in the above entitled bill of complaint; that he has read the foregoing bill
28 of complaint and knows the contents thereof, and that the same is true to the knowledge of deponent.

JAMES T. MAHER.

Subscribed and sworn to before me this 14th day of February, 1934.

ALPHA M. CONLIN.
Notary Public, Ramsey County, Minn.

(Seal)

My commission expires July 9, 1935.

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29 Subpoena in Chancery.

United States of America,
District of North Dakota—ss.

The President of the United States of America

To J. J. Weeks, State Tax Commissioner; J. M. Baillie as Auditor and L. T. Halvorson as Treasurer of Barnes County; G. A. Gilbertson as Auditor and W. D. Conway as Treasurer of Benson County; Ole Colbornson as Auditor and Sam H. Wilson as Treasurer of Bottineau County; H. F. Magedanz as Auditor and Jerry Donovan as Treasurer of Burke County; F. Ford Doherty as Auditor and C. A. Baumgartner as Treas-

urer of Cass County; Otto Rasmusson as Auditor and A. A. Wilson as Treasurer of Cavalier County; John A. Dawe as Auditor and H. J. Oberman as Treasurer of Dickey County; R. H. Lynch as Auditor and O. A. Steffler as Treasurer of Divide County; S. W. Layman as Auditor and Hugh Peoples as Treasurer of Eddy County; J. B. McWethy as Auditor and M. P. Roberts as Treasurer of Foster County; Martin O. Haugen as Auditor and John Sandbek as Treasurer of Grand Forks County; P. A. Melgard as Auditor and R. J. Howden as Treasurer of Griggs County; E. W. Olson as Auditor and Oscar R. Fisher as Treasurer of McHenry County; Arne Tollefson as Auditor and Oluf Erickson as Treasurer of McKenzie County; F. J. Haines as Auditor and Nels Hofland as Treasurer of Mountrail County; Peter Jorgenson as Auditor and J. J. Schindele as Treasurer of Nelson County; Wm. W. Felson as Auditor and J. H. Hannesson as Treasurer of Pembina County; O. A. Spillum as Auditor and O. T. Tofsrud as Treasurer of Pierce County; J. O. Peterson as Auditor and F. J. Burckhard as Treasurer of Ramsey County; C. E. Colcord as Auditor and W. C. Budke as Treasurer of Renville County; George J. Fischer as Auditor and Karl L. Mikkelson as Treasurer of Richland County; Jas. H. Penny as Auditor and Allister McKay as Treasurer of Rolette County; R. W. Safstrom as Auditor and H. O. Webster as Treasurer of Sargent County; G. H. Mustad as Auditor and Florence Carlson as Treasurer of Steele County; A. T. Mooney as Auditor and John Gang as Treasurer of Towner County; Gerhard D. Olson as Auditor and Thomas P. Strand as Treasurer of Traill County; W. J. LaMarre as Auditor and Benj. A. Gudajtes as Treasurer of Walsh County; A. G. Torgerson as Auditor and Bert A. Balerud as Treasurer of Ward County; Otto G. Krueger as Auditor and Edith Darcy as Treasurer of Wells County; Morten Mortensen as Auditor and Oscar N. Lee as Treasurer of Williams County, all of the State of North Dakota,—Greeting:

We Command You, and each of you, that you appear before the Judge of the District Court of the United States for the District of North Dakota, at Fargo, on the 7th day of March, A. D. 1934, to answer to the bill of complaint of Great Northern Railway Company this day filed in the office of the Clerk of said Court, and then and there to receive and abide by such order and decree as shall then or thereafter be made, upon

pain of said bill being taken as confessed against you and decree pronounced accordingly.

Witness, the Honorable Andrew Miller, Judge of the District Court of the United States, at Fargo, this 15th day of February, A. D. 1934.

(Seal) J. A. MONTGOMERY, Clerk,
By E. R. Steele, Deputy.

Memorandum.

The above-named defendants are notified that unless they file their answer or other defense in the Clerk's office of said Court, at Fargo, aforesaid, on or before the twentieth day after service, excluding the day thereof, as above stated, the complaint will be taken against them as confessed, and a decree entered thereon accordingly.

J. A. MONTGOMERY, Clerk,
By E. R. Steele, Deputy.

"Filed Mar. 6, 1934. J. A. Montgomery, Clerk."

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30 The foregoing subpoena in chancery was duly served on the 17th day of February, 1934, upon the following defendants:

Martin O. Haugen, Auditor, and John Sandbek, Treasurer, of Grand Forks County, North Dakota; F. Ford Doherty, Auditor, and C. A. Baumgartner, Treasurer, of Cass County, North Dakota;

Said subpoena was duly served on the 19th day of February, 1934, upon the following defendants:

J. M. Bailie, Auditor and L. T. Halvorson, Treasurer, of Barnes County, North Dakota; G. A. Gilbertson, Auditor, and W. D. Conway, Treasurer, of Benson County, North Dakota; H. F. Magedanz, Auditor, and Jerry Donovan, Treasurer of Burke County, North Dakota; John A. Dawe, Auditor, and H. J. Oberman, Treasurer, of Dickey County, North Dakota; Otto G. Krueger, Auditor, and Edith Darcy, Treasurer of Wells County, North Dakota; A. G. Torgerson, Auditor, and Bert A. Balerud, Treasurer, of Ward County, North Dakota; G. H. Mustad, Auditor, and Florence Carlson, Treasurer, of Steele County, North Dakota; J. O. Peterson, Auditor, and F. J. Burckhard, Treasurer, of Ramsey County, North Dakota; S. W. Lyman, Auditor, and Hugh Peoples, Treasurer, of Eddy County, North Dakota; J. B. McWethy, Auditor and

M. P. Roberts, Treasurer, of Foster County, North Dakota; E. W. Olson, Auditor, and Oscar R. Fisher, Treasurer, of McHenry County, North Dakota; Arne Tollefson, Auditor, and Oluf Erickson, Treasurer, of McKenzie County, North Dakota; F. J. Haines, Auditor, and Nels Hofland, Treasurer, of Mountrail County, North Dakota; O. A. Spillum, Auditor, and O. T. Tofsrud, Treasurer, of Pierce County, North Dakota; Peter Jorgenson, Auditor, and J. J. Schindele, Treasurer, of Nelson County, North Dakota;

Said subpoena was duly served on the 20th day of February, 1934, upon the following defendants:

Wm. W. Felson, Auditor, and J. H. Hannesson, Treasurer, of Pembina County, North Dakota; P. A. Melgard, Auditor, and R. J. Howden, Treasurer, of Griggs County, North Dakota; Jas. H. Penny, Auditor, and Allister McKay, Treasurer, of Rolette County, North Dakota; W. J. LaMarre, Auditor, and Benj. A. Gudajtes, Treasurer, of Walsh County, North Dakota; Morton Mortensen, Auditor, and Oscar N. Lee, Treasurer, of Williams County, North Dakota; R. H. Lynch, Auditor, and O. A. Steffler, Treasurer, of Divide County, North Dakota;

Said subpoena was duly served on the 21st day of February, 1934, upon the following defendants:

George J. Fischer, Auditor, and Karl L. Mikkelson, Treasurer of Richland County, North Dakota; Gerhard D. Olson, Auditor, and Thomas P. Strand, Treasurer, of Traill County, North Dakota; Ole Colbornson, Auditor, and Sam H. Wilson, Treasurer, of Bottineau County, North Dakota;

Said subpoena was duly served on the 23rd day of February, 1934, upon the following named defendants:

Otto Rasmussen, Auditor, and A. A. Wilson, Treasurer, of Cavalier County, North Dakota;

Said subpoena was duly served on the 24th day of February, 1934, upon the following defendants:

A. T. Mooney, Auditor, and John Gang, Treasurer, of Towner County, North Dakota;

Said subpoena was duly served on the 26th day of Feb-
31 ruary, 1934, upon the following defendants:

C. E. Colcord, Auditor, and W. C. Budke, Treasurer, of Renville County, North Dakota;

Said subpoena was duly served on the 1st day of March, 1934, upon the following defendant:

J. J. Weeks, Tax Commissioner of the State of North Dakota;

Said subpoena was duly served on the 2nd day of March, 1934, upon the following defendants:

R. W. Safstrom, Auditor, and H. O. Webster, Treasurer, of Sargent County, North Dakota.

"Filed Mar. 6, 1934. J. A. Montgomery, Clerk."

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32 Answer to Bill of Complaint.

I.

Now come the above named defendants and for their special Answer in the nature of a plea to the jurisdiction state that this court ought not to take jurisdiction of the cause of action alleged in the Bill of Complaint filed herein for the following reasons:

A.

This action does not arise under the fourteenth amendment of the Constitution of the United States.

B.

That the taxes of which the plaintiff complains were not fraudulently levied but on the contrary were legally and justly levied pursuant to the statutes of the State of North Dakota.

C.

That the assessment complained of in plaintiff's Bill of Complaint is a fair, just and equitable assessment and not in excess of the actual value of plaintiff's property.

D.

That the taxes and assessment complained of in plaintiff's Bill of Complaint are not discriminatory as against the plaintiff.

E.

That the taxes complained of in plaintiff's Bill of Complaint do not improperly burden interstate commerce in derogation of the power of Congress to regulate interstate commerce under the Constitution of the United States.

F.

That the plaintiff has a full, complete, speedy and adequate remedy at law and that this Court is without jurisdiction to

determine this matter in controversy because of lack of equity.

33 II.

Further answering the plaintiff's Complaint, the defendants allege:

A.

Defendants admit the allegations contained in paragraphs I, II, IV, V and VI.

B.

Answering Paragraph III of said Complaint, the defendants deny that this action arises under the Fourteenth Amendment to the Constitution of the United States and further deny that the assessments and taxes complained of are in amounts in excess of the actual value of the property assessed or were in any manner assessed or levied contrary to the Constitution and statutes of the State of North Dakota, or that the same are unjust or discriminatory or in violation of the Constitution of the United States or improperly burden interstate commerce in derogation of the power of Congress to regulate interstate commerce or take property without due process of law or impose an arbitrary or unreasonable burden upon commerce among the states and foreign nations, and on the contrary these defendants allege that said assessments and taxes were in all things legally, fairly, and justly made and levied.

C.

Answering Paragraph VII of the Complaint the defendants admit that the State Board of Equalization did assess plaintiff's railway property within the State of North Dakota for the year 1933 at the sum of $78,832,888.00, and that said assessment was certified out to the several county auditors above named upon the basis of the total mileage of the plaintiff in each of said counties, but these defendants specifically deny that said assessment was in excess of the true and full value in money of plaintiff's property. Defendants allege that each defendant has insufficient knowledge of the taxes allocated to the various other counties represented to enable him to form a belief as to the truth of the allegations and computations contained in the schedules set forth in said paragraph and therefore they deny the same and put the plaintiff to its proof thereof.

34 D.

Further answering Paragraph VII of the Complaint, defendants deny that 43% of said tax levy is excessive, and

on the contrary allege that the assessment made represents the true value of plaintiff's property in North Dakota in money.

E.

Answering Paragraph VIII of the Complaint these defendants allege that it is the duty of the State Board of Equalization to assess the property of plaintiff's railway in accordance with the terms of Section 2122 Supplement to the 1913 Compiled Laws of North Dakota, 1913-1925, which provides:

"All property subject to taxation shall be assessed at its true and full value in money. In determining the true and full value of real and personal property the assessor shall not adopt a lower or different standard of value because the same is to serve as a basis of taxation; nor shall he adopt as a criterion of value the price at which said property would sell at auction or at forced sale or in the aggregate with all the property in the town or district, but he shall value each article or description of property by itself and at such sum or price as he believes the same to be fairly worth in money. In assessing any tract or lot of real property the value of the land, exclusive of improvements shall be determined; also the value of all taxable improvements and structures thereon, and the aggregate value of the property, including all taxable structures and other improvements, excluding the value of crops growing upon cultivated lands. In valuing any real property upon which there is a coal or other mine or stone or other quarry, the same shall be valued at such a price as such property, including the mine or quarry, would sell at a fair voluntary sale for cash."

That the law above stated applies to the State Board of Equalization as well as assessors. The State Board of Equalization is thereby required to exercise its best judgment and discretion as to the assessment of operating property of railroad companies and is required to assess such property at such amount as the Board believes such property to be fairly worth in money. Said law does not permit the State Board of Equalization to substitute for statutory and constitutional provisions, requiring the Board to exercise its judgment and discretion as to value, any arbitrary formula, method or rule based upon operating and financial statistics of railroads.

Section 2074 Compiled Laws of North Dakota 1913 provides in part that the term "true and full value" means the

usual selling price at the place where the property to
35 which the term is applied shall be at the time of the assessment, being the price which could be obtained therefor at private sale and not at a forced public auction sale.

These defendants admit that due to the fact that neither entire railroad systems nor the portions of railroad systems within any given state are ordinarily sold, and due to the resulting difficulty in arriving at the usual selling price of railroad property from the evidence of sales of similar property, the practice has grown up in the State of North Dakota and elsewhere of basing the valuation of railroad systems and the allocation of the system values to the states upon certain arbitrary formulas developed by statisticians and taxing authorities. These formulas and arbitrary methods of arrving at values during normal times served to reflect to a reasonable degree of accuracy the true value of railroad property. Defendants allege, however, that since November, 1929, there has existed a world-wide panic, depression and financial crisis which has artificially and unnaturally affected the prices of stocks and bonds, and the earnings of all businesses, and destroyed much of the evidentiary value of the results of such arbitrary formulas.

The State Board of Equalization of the State of North Dakota and the taxing authorities of other states have used and considered said formulas based upon the operating and financial statistics of railroads as evidence of the value of railroads but not as the exclusive source of evidence of value.

The commonly accepted practice in determining the system value of railroads, which practice has been followed by the tax officers and agents of the plaintiff has been first to determine the value of the entire railroad system and then to allocate such system value among the several states through which the system operates. The financial and operating statistics furnished by the plaintiff to the State Board of Equalization in the year 1933 and for many years previous thereto were based upon this method of determining the value and never, either in 1933 or at any prior time has the plaintiff or any other railroad presented to the State Board of Equalization any plan or statistics which would enable it to determine the valuation of the property of the railroad within the state through the attemped capitalization of the net earnings of the railroad within the state.

Railroad accounting practices are not such as to per-
36. mit any determination of value upon the capitalization of net earnings within the state for the reason

that it is impossible accurately to make any segregation of income and operating costs by state lines.

Defendants allege that the State Board of Equalization pursuant to its constitutional and statutory duty considered the financial and operating statistics of the plaintiff and the computations of value based upon the accepted formulas together with all other evidence before it and matters of common knowledge including the conditions of the times and from all such evidence arrived at the assessment herein complained of as its honest judgment as to the full and true value of the plaintiff's property in North Dakota in money.

F.

Answering Paragraph IX of plaintiff's Complaint, these defendants deny that the assessment made by the State Board of Equalization in the year 1933 or in any prior year resulted in assessing in North Dakota property actually located in other states or in over-valuing plaintiff's railroad system, and on the contrary these defendants allege that under all of the standard and accepted and generally used and approved formulas for determining railroad valuation, including the formulas adopted by this Court in railroad tax litigation within the past year, the assessment of the plaintiff for several years prior to 1933 was less than the actual full and true value of the railroad within this state, and further allege that the assessment for 1933 constituted a fair, reasonable and just valuation of the North Dakota property of the plaintiff.

G.

Answering Paragraph X of plaintiff's Complaint, the defendant admits that in the year 1932 the State Tax Commissioner did present to the State Board of Equalization computations based upon a determination of the system value of the railroad by the use of a composite of the average stock and bond values of the plaintiff for a period of five years preceding the assessment, and the average value ascertained by capitalizing net earnings for five years preceding the assessment and by applying and allocating such system value to the State of North Dakota upon the basis of the five factors set forth in Paragraph IX of the Complaint,
37 which said formula produced a value of $76,115,715.00; that he also made an allocation of the same system value to North Dakota by another method, using for the purpose of allocation only factors numbered 3, 4, and 5 in said list which produced a value of $79,417,825.00. In addition thereto defendants allege that the Tax Commissioner

presented the computations based upon a third method of allocating the system value by which he applied the average of the factors numbered 1, 3, 4 and 5 in the above list which produced a valuation of $80,671,790.00. Defendants further allege that upon this evidence and upon all other evidence and matters of common knowledge before it the Board did in the year 1932 fix the valuation of plaintiff's property in North Dakota at $78,850,024.00.

Defendants further allege that in the year 1933 the State Tax Commissioner and the plaintiff did present to the State Board of Equalization the financial and operating statistics of the plaintiff's railroad and reports and computations based upon the formulas used in 1932 and other evidence of value, and that the Board of Equalization after full consideration of said statistics, computations, reports, and all other evidence of value and matters of common knowledge, did fix the assessment of plaintiff's property in North Dakota for the year 1933 at $78,832,888.00, which said amount represented the honest judgment of the State Board of Equalization and the true and full value of the plaintiff's North Dakota property in money.

H.

Answering Paragraph XI the defendants deny that the system value determined by the State Board of Equalization during the year 1933 or any prior year was excessive because the amounts deducted from stock and bond values as the value of plaintiff's properties and securities not forming a part of its railroad system were inadequate and less than the full values of such properties and securities, and on the contrary allege that a large portion of the non-operating property of the plaintiff consists of stocks and bonds which are not quoted on the market and upon which no actual market value can be placed. Defendants allege that for many years past a large amount of said stocks and bonds have paid no dividends or interest whatever. The computations presented by the State Tax Commissioner and
38 the plaintiff to the State Board of Equalization deducted from the total stock and bond valuation of the plaintiff for non-operating property much more than the non-operating property was actually worth if computed upon the same basis as is contended for by the plaintiff for the valuation of its operating property.

Defendants deny that plaintiff's net earnings were capitalized at an inadequate rate percent, and on the contrary allege that they were capitalized at 6% which is the usual,

customary and accepted rate adopted by taxing authorities, and Courts, throughout the United States for normal times. Defendants allege that during the last four years there has existed a great national economic crisis and emergency which has temporarily destroyed the earning power of investments and defendants allege that a more accurate reflection of the value of the plaintiff's property would be produced by capitalizing the net income at 4%.

Defendants further deny that abnormal business conditions in 1928 and 1929 produced abnormally high earnings, and high stock and bond values, and on the contrary these defendants allege that the earnings of the railroad in 1928 and 1929 represent a fair average of the normal earning power of the railroad, and that the earnings since 1929 are abnormally low and are not a reflection of either the prospective or past value of the railway. These defendants allege that a five-year average of net earnings or of stock and bond values during abnormally depressed times such as the present is the shortest possible period which would give any accurate reflection of values, and that by averaging stock and bond values or net earnings over a period of seven to ten years the results produced would much more accurately reflect true values than the average over a three-year or five-year period.

I.

Answering Paragraph XII of the Complaint these defendants deny that the use of the allocation factors numbered 1, 3, 4 and 5 in Paragraph IX of the Complaint have resulted in assessing and taxing in North Dakota property owned by the plaintiff and located in other states, and in an over-assessment or over-valuation of plaintiff's property in North Dakota, and on the contrary allege that the best and most accurate system of allocating the system value among
39 the states is to make use of all five of the factors of allocation, and that an average of the five factors mentioned in Paragraph IX of the Complaint much more accurately and truly reflects the value of the railroad in any given state than the use of any one factor or group of said factors less than five.

Defendants specifically deny that the factor numbered 2 in Paragraph IX of the Complaint, being the physical property factor, as measured by cost of reproduction less depreciation, taken by itself constitutes a reasonable basis for allocating system values to the states for the reason that, as alleged in Paragraph VIII of the Complaint, the value of a railroad is dependent not upon the investment in property

but rather upon its value as a going concern. The state taxing authorities in placing an assessed valuation upon property are not concerned with the amount of the investment in the property, but with its market value. Defendants allege that the market value of the plantiff's property in North Dakota, as part of a railroad system in operation, is greatly enhanced by reason of the fact that the cost of operation and maintenance within this state is very low in comparison with other states, and that said cost of operation and maintenance is low by reason of the topography of this state as set forth and described in Paragraph XII of the Complaint. The physical property factor of allocation does not take into consideration the net earning power of the portion of the railroad within this state, but is based solely upon the investment in road and equipment. These defendants have no knowledge or information sufficient to form a belief as to the truth of the percentages of branch line and main line trackage in this and other states, the percentages of physical property per mile of line in this and other states, the amount of grading and embankment, bridges, tunnels, snow-protection, terminal property and physical property per mile of line in this and other states, and the percentage of cost of reproduction less depreciation per mile of line in this and other states, and therefore deny the same and put the plaintiff on its proof thereof.

J.

Answering Paragraph XIII of plaintiff's Complaint the defendants have no knowledge or information sufficient to form a belief as to the truth of the allegations in said paragraph contained and therefore defendants deny the same and put the plaintiff to its proof thereof.

K.

Answering Paragraph XIV of plaintiff's Complaint, defendants deny that the allocation factors of all track mileage, ton and passenger mileage and car and locomotive mileage are incorrect or inaccurate measures of the value of plaintiff's property within the State of North Dakota, and on the contrary allege that the use of the average of said three factors together with the factors of cost of reproduction less depreciation and gross earnings more fairly indicates the value of the portion of the railroad operating in any given state than does the use of any one factor or group of such factors less than five.

Defendants deny that the use of the allocation factors mentioned in Paragraph XIV results in apportioning to North

Dakota a part of the revenues collected for service actually performed in states of more expensive construction and operation, and on the contrary defendants allege that by reason of the lower cost of construction repairs, maintenance and operation within the State of North Dakota, that the average mile of line within this state is of a higher value than the average mile of line elsewhere as a part of an operating railroad system.

Defendants allege that the high rates for the movement of through-traffic fixed by the Interstate Commerce Commission as alleged in Paragraph XIV of the Complaint are charged alike for the mileage in North Dakota and other states, and that therefore the net revenue from the North Dakota mileage is greatly in excess of the net revenue in other states where construction, repairs, maintenance and operation are more expensive as alleged in Paragraph XIV of the Complaint.

L.

Answering Paragraph XV of plaintiff's Complaint, the defendants admit that the net earnings of the plaintiff's railroad system for the year 1932 had greatly decreased because of the abnormal business depression hereinbefore referred to, but allege that a three-year period gives no true or accurate indication of the average earnings of a railroad. Defendants further allege that if any arbitrary formula for determining value by the capitalization of earnings is to be used, it is essential that the same period should be
41 used from year to year. The use of a one-year period if used consistently would, over a long period of years, produce the same total results in taxation as would the use of a five-year period or any longer period. The use of a one-year period would produce violent fluctuations in the assessment from year to year whereas the use of a five-year period or longer period would maintain a less irregular assessment and produce more uniformity in taxes from year to year. For the past fifteen years it has been the practice of the Tax Commissioner in his calculations and of the railroads in their calculations to use a five-year period and to abandon the five-year period in favor of the three-year period during a time of depression would be to unjustly lower the assessed valuation of the railroads. In its evidence and computations presented to the Board of Equalization in 1933, the plaintiff used a five-year period for determining system value upon the capitalization of earnings method and presented no evidence, argument or computations in support of the use of a three-year period.

Further answering Paragraph XV Defendants admit that the average selling price of plaintiff's stocks and bonds for the calendar year preceding the 1932 assessment was $461,845,-051.00 and for the calendar year preceding the 1933 assessment was $296,301,177.00. The defendants deny that on the date of assessment the market value of plaintiff's stocks and bonds was only $229,485,500.00, and allege that the law does not fix any specified date as of which the assessment is made. Defendants allege that if at any time the stocks and bonds of the plaintiff were of a total market value as low as $229,-485,500.00 the time of such valuation was immediately following the national banking holiday declared by the President of the United States and at a time when the stock and bond markets were in a state of complete chaos, and that such market value as of such date gives no true indication of the value of plaintiff's stocks and bonds. Defendants allege that the average market value of plaintiff's stocks and bonds during the month of July, 1933, being the month immediately preceding the assessment of the plaintiff for 1933, was $375,-308,403.00.

42 Defendants further allege that the decrease in plaintiff's stock and bond values was represented largely by a decrease in the market value of the stock of the plaintiff, and that said market value of the stock was not an indication of the sound or considered judgment of investors as to the value of the stock but was a result purely of panic psychology and speculation. The average market price of plaintiff's stock alone during the year 1932, being the year immediately preceding the assessment, was $32,830,915.00, whereas in the year 1930 dividends had been declared upon said stock amounting to $18,673,035.00 and during the year 1931 dividends had been declared in the sum of $6,220,716.00, making a total dividend during the two years preceding 1932 of approximately 80% of the entire market price of the stock during 1932. Defendants further allege that during the year 1933 and previous to the assessment date the market price of the shares of stock of the plaintiff had at one time fallen to the sum of $4.62 per share, whereas in 1930 a dividend of approximately $7.50 per share, and in 1931 a dividend of approximately $2.50 per share had been declared and paid. Defendants therefore allege that the market price of the stocks and bonds, and particularly of the stocks of the plaintiff during the years 1932 and 1933 give no indication whatever of the true value of the plaintiff's railroad.

Defendants deny that a computation of the value of plaintiff's property in North Dakota for 1933 by the method used

in 1932 and prior years would have produced an assessment of $15,000,000.00 less than that actually made, and on the contrary allege that an application of the formulas presented to the Board of Equalization in prior years in 1933 would have produced a reduction of approximately $13,000,000.00 only. Defendants further allege that all of the statistics, formulas and computations and all other evidence and matters of common knowledge were considered by the Board in arriving at its 1933 assessment.

43 M.

Answering Paragraph XVI, defendants deny that the cost of reproduction of plaintiff's system as of December 31, 1932, was only $564,608,688, and on the contrary allege that the cost of reproduction less depreciation as reported by plaintiff to the State Tax Commissioner as of December 31, 1932, was $628,106,411.00 for the system and $89,964,680.00 for the State of North Dakota. Defendants further allege that the investment in road and equipment as appears by the books of the plaintiff in the years 1928 and 1932 was as follows:

December 31, 1928	$567,000,000.00
December 31, 1929	570,000,000.00
December 31, 1930	580,000,000.00
December 31, 1931	589,000,000.00
December 31, 1932	589,000,000.00

And that the net earnings of the plaintiff upon its investment in road and equipment as set up in the books of the company was 5.51% in 1928, 5.69% in 1929, 3.78% in 1930, 2.15% in 1931, and 0.22% in 1932, and the defendants therefore deny that plaintiff is unable to earn a fair rate of return upon the full reproduction cost less depreciation.

Defendants have no knowledge sufficient to form a belief as to the truth of the allegation that the assessed value of plaintiff's property for 1933 in all of the other states in which any part of its line is located, and which make ad valorem assessments is 52.32% of the cost of reproduction less depreciation in those states, and therefore deny the same, and put the plaintiff on its proof thereof. Defendants further allege that if said percentage is the true and correct figure it is misleading and inaccurate for the reason that in many of the other states through which plaintiff's system operates assessments are made upon a fractional basis only.

N.

Answering Paragraph XVII defendants deny each and all of the allegations contained in said Paragraph, and allege that the figures and percentages set forth in said paragraph could have been arrived at only through the use of some new, unsound and untried formula or method of computation of value, and defendants allege that no statistics, for-
44 mula, or computations were presented to the State Board of Equalization in the year 1933 which would substantiate the figures and percentages alleged in Paragraph XVII.

O.

Answering Paragraph XVIII of plaintiff's Complaint, defendants deny that the Board of Equalization deliberately, intentionally, or knowingly over-valued or over-assessed plaintiff's property or ignored any of the facts, figures or computations material to a determination of the value of plaintiff's property, and deny that any value of property located in other states was assessed in North Dakota, and deny that the board acted without logical processes of reasoning or basis of fact, and deny that said assessment was made arbitrarily, fraudulently or excessively and on the contrary these defendants allege that said assessment for 1933, and for all prior years, was made after full and fair consideration of all the facts herein set forth and of all other facts material to a determination of the value of plaintiff's railroad and that the assessment made in 1933 represented the honest, fair, and just determination of the Board of Equalization.

Defendants allege that under the recognized, accepted and usual methods of ascertaining railroad values the assessment for the year 1929 was approximately 100% of full and true value, for 1930 was approximately 96% of full and true value, for 1931 was approximately 96.5% of full and true value, and for 1932 was 100.3% of full and true value, and that the apparent over-assessment for the year 1933, if computed strictly upon the arbitrary formulas hereinbefore referred to is occasioned by the fact that the application of the arbitrary formulas hereinbefore referred to had lost most of their evidentiary value by reason of the panic conditions existing in 1933 as hereinbefore referred to, and that in order to arrive at any honest, fair, or just determination of the value of plaintiff's property in 1933 it was necessary

to add to the results produced by such arbitrary formula large amounts in order to compensate for the artificially and unnaturally low prices of stocks and bonds as hereinbefore alleged, and for the temporary effect upon plaintiff's net earnings of the collapse of business generally throughout the world.

45

P.

Answering Paragraph XIX of plaintiff's Complaint, defendants allege that other property in the State of North Dakota was assessed upon the basis of full and true market value as near as the same could be determined from such evidences of value as were available. Defendants allege, however, that the market for other property in the state was destroyed by the depression hereinbefore referred to and that it was impossible during the year of 1933 accurately to assess any property, and that as a matter of fact other property was assessed vastly in excess of market value if the term "market value" is to be construed as the value as determined by the sales of like property during the year 1933. Defendants further allege that on the basis of earnings farm property in the State of North Dakota, which constitutes a large portion of the property of the state, would have had absolutely no value during the past five years for the reason that such property had produced no earnings. Defendants therefore deny that the plaintiff was discriminated against in its 1933 assessment, and deny that such assessment imposes upon the plaintiff any unfair or unwarranted share of the tax burden of the state as compared with other taxpayers.

Defendants specifically deny that the collection of said taxes would deprive plaintiff of property without due process of law, would improperly emburden interstate commerce, would obstruct plaintiff in the transportation of persons and property in interstate commerce or would in any manner violate any of the provisions of the Constitution of the United States or of the State of North Dakota.

Q.

Answering Paragraph XX of plaintiff's Complaint, defendants deny that there is any exaggeration or distortion in the allocation factors mentioned in Paragraph IX of the Complaint, and deny that the method of computation set forth in Paragraph XX would produce any fair, reasonable, or accurate determination of the value of plaintiff's property in North Dakota. Defendants further allege that the formula

or method of computation set forth in Paragraph XX is a formula prepared by the plaintiff for use in this case only; that the said formula has never been used or contended
46 for by the plaintiff before the State Board of Equalization and was not presented to it at its 1933 meeting; that the method has not been used or followed by any other state through which the plaintiff's railroad operates; and that it is a new untried unrecognized and unreasonable formula or method for determining value.

Defendants allege that the formula therein set forth gives undue weight to the physical property factor of allocation which said physical property factor gives no indication whatever of the actual value for railway purposes of the property of the plaintiff located within this state.

R.

Answering Paragraph XXI of Plaintiff's Complaint, defendants admit the net earnings for the years 1928 to 1932 as set forth in said paragraph, but deny that the earning power of the plaintiff's railway system at the date of assessment did not exceed the sum of $12,000,000.00 per year, and on the contrary allege that from the years 1923 to 1929 inclusive the net earnings of the plaintiff never fell below $24,000,000.00 in any year, and from 1925 to 1929 both inclusive, the net income never fell below $28,000,000.00, and that the average annual net income for the five-year period ending upon December 31, 1926, was $25,153,298.00, for the five years preceding December 31, 1927, was $27,538,486.00, for the five years preceding December 31, 1928, was $28,850,902.00, for the five years preceding December 31, 1929, was $30,502,149.00, for the five years preceding December 31, 1930, was $29,429,414.00, for the five years preceding December 31, 1931, was $25,507,212.00, and for the five years preceding December 31, 1932, was $19,924,818.00. Defendants therefore allege that the present and prospective earning power of plaintiff's railroad is a sum in excess of $20,000,000.00 per year. Defendants deny that the capitalization of net earnings at 7% would produce any reasonable or accurate indication of the value of plaintiff's railroad, and on the contrary allege that a much more accurate, just and fair valuation in view of the national crisis and depression hereinbefore referred to and in view of the reduced income upon all other investments would be produced by capitalizing said net income at the rate of
4%.

47 S.

Answering Paragraph XXII Defendants allege that the total system value of the plaintiff, exclusive of non-operat-

ing property as computed by the usual accepted and reasonable methods of arriving at railroad valuations for the year ending December 31, 1932, was $413,223,044.00. Defendants allege that the value of non-operating properties set forth in the 1932 report of the State Tax Commissioner to the Board of Equalization was and is excessive for the reason that said non-operating properties had greatly depreciated in value, and that the net taxable system value as produced by the computations of the State Tax Commissioner in 1932 was actually much less than the full and true market value thereof.

Defendants deny that the full and true value in money of plaintiff's railroad system on the date of assessment was $322,080,233.00, and on the contrary allege that the true and correct value in money of plaintiff's railroad system was a sum in excess of $413,233,044.00.

T.

Answering Paragraph XXIII defendants deny that the full and true value in money of plaintiff's property in North Dakota on the date of assessment did not exceed $45,000,000.00, and on the contrary allege that the application of the usual customary and reasonable and accepted formulas of allocation to the system value of $413,233,044.00 produces a valuation in the State of North Dakota of $78,514,278.00, and defendants allege that said amount represents a determination of the value of the plaintiff's North Dakota property upon the basis used and accepted by the taxing authorities of the plaintiff and other railroads for a long period of years before the Board of Equalization.

Defendants allege that there is no accurate method whereby the net earnings of a railroad may be determined in any given state.

U.

Answering Paragraph XXIV these defendants admit that the laws of the State of North Dakota contain the requirements set forth in Paragraph XXIV, but defendants specifically deny that the effect of said statutes and the enforcement thereof by the officers therein mentioned would result in many vexatious proceedings resulting in expense, loss, or embarrassment to the plaintiff or in any impediment to
48 the management and operation of plaintiff's business.

Defendants deny that the plaintiff has no adequate or complete remedy at law, and on the contrary allege that the plaintiff has a complete, adequate and speedy remedy in the

Courts of the State of North Dakota by the payment of said taxes under protest and as provided in Chapter 286 of the Laws of North Dakota for the year 1931, and which provides:

"1. That any person (including any firm or corporation) against whom any tax is levied, or who may be required to pay the same, who pays such tax under protest to the County Treasurer, giving notice at the time of payment of the reasons for such protest, may in writing at any time within Sixty (60) Days thereafter apply to the Board of County Commissioners, under the provisions of Section 2241c of the 1925 Supplement to the Compiled Laws of North Dakota for the year 1913, for an abatement, adjustment or refundment of taxes thus paid, and may within Sixty (60) Days after notice of rejection of such application commence an action against such County Treasurer for the recovery thereof. Such application shall show the post office address of the applicant and notice by registered mail addressed to such applicant shall be notice of rejection of applicant's claim. If the Court determines that such tax was unlawfully collected, in whole or in part, for any reason going or pertaining to the merits of the tax, it shall enter judgment accordingly, and such judgment shall be paid upon final determination of the action. Both parties shall have the right of appeal as in other actions.

"2. Whenever taxes have been paid under protest the County Treasurer shall keep money thus paid and collected in a separate fund known as 'Taxes Paid Under Protest Fund' and such moneys shall not be paid or disbursed to the State, to any fund of the County, or to any local taxing district until the period prescribed in Section One (1) of this Act has expired, and in case an action is commenced the County Treasurer shall retain in such fund until such action shall be finally determined, that part of portion of the tax paid under protest, which the plaintiff in his complaint, contends is valid or illegal."

Defendants further allege that plaintiff has another complete, adequate and speedy remedy in the Courts of the State of North Dakota, which remedy is provided by Chapter 276, Session Laws of North Dakota for the year 1931, which provides, in substance, that any person (including any firm or corporation) may apply for abatement or refund of taxes based upon an invalid, inequitable or unjustly excessive assessment; that the Board of County Commissioners shall, by a majority vote, either approve or reject the application in whole or in part; and that such application for abatement or refund of taxes approved by the Board of County Commis-

sioners shall be effective when approved by the State Tax Commissioner; and that an appeal from such decision may be taken to the District Court by any person aggrieved,
49 and a trial de novo of the entire issue had in said Court.

Defendants deny that the interposition of a Court of equity is necessary to preserve the rights of the plaintiff or secure to the plaintiff any relief which might lawfully be afforded the plaintiff.

V.

Answering Paragraph XXV each of the defendants has no information sufficient to form a belief as to whether or not a tender or offer to pay the other defendants has been made as alleged in Paragraph XXV, and defendants therefore deny the same and put the plaintiff to its proof thereof.

W.

Defendants further allege that a writ of injunction is not necessary to preserve the rights of the plaintiff, and that all of the acts of the defendants heretofore done and hereafter to be done have been and will be in conformity to law.

Wherefore, the defendants pray:

(1) That said Bill of Complaint be dismissed for want of equity and want of jurisdiction in the federal courts over the cause of action alleged herein and they be discharged with their costs.

(2) That the defendants having fully answered the Bill of Complaint herein, that they be hence dismissed with costs and disbursements herein taxed against the complainant.

(3) For all other and further relief as to the court may appear meet and just.

Dated at Bismarck, North Dakota, March 7, 1934.

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Attorneys for Defendants.

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W. A. JACOBSEN,
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51

F. W. MEDBERRY,
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OLAF M. THORSON,
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HELGI JOHANNESON,
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State's Attorney of Ramsey County, North Dakota, and Attorney for Defendants, J. O. Peterson, as Auditor and F. J. Burckhard, as Treasurer of Ramsey County. P. O. Address, Devils Lake, North Dakota.

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CLIFFORD SCHNELLER,
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D. J. McLENNAN,
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A. LESLIE,
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E. T. MELDAHL,
State's Attorney of Steele County, North Dakota, and Attorney for Defendants, G. H. Mustad, as Auditor and Florence Carlson, as Treasurer of Steele County. P. O. Address, Finley, North Dakota.

J. J. KEHOE,
State's Attorney of Towner County, North Dakota, and Attorney for A. T. Mooney, as Auditor and John Gang, as Treasurer of Towner County. P. O. Address, Cando, North Dakota.

W. M. BACKSTROM,
State's Attorney of Traill County, North Dakota, and Attorney for Defendants, Gerhard D. Olson, as Auditor and Thomas P. Strand, as Treasurer of Traill County. P. O. Address, Hillsboro, North Dakota.

T. I. DAHL,
State's Attorney of Walsh County, North Dakota, and Attorney for Defendants, W. J. LaMarre, as Auditor and Benj. A. Gudajtes, as Treasurer of Walsh County. P. O. Address, Grafton, North Dakota.

ROBT. W. PALDA,
State's Attorney of Ward County, North Dakota, and Attorney for Defendants, A. G. Torgerson, as Auditor and Bert A. Balerud, as Treasurer of Ward County. P. O. Address, Minot, North Dakota.

52 J. W. SCHMIDT,
State's Attorney of Wells County, North Dakota, and Attorney for Defendants, Otto G. Krueger, as Auditor and Edith Darcy, as Treasurer of Wells County. P. O. Address, Fessenden, North Dakota.

WALTER O. BURK,
State's Attorney of Williams County, North Dakota, and Attorney for Defendants, Morten Mortenson, as Auditor and Oscar N. Lee, as Treasurer of Williams County. P. O. Address, Williston, North Dakota.

Endorsed on the back as follows: "(Title of Case) Answer To Bill Of Complaint. Due and personal service of a copy of the within Answer to Bill of Complaint is hereby admitted

(3) This action involves, exclusive of interest and costs, a sum or value in excess of $600,000.00; and involves a sum or value in excess of $3,000.00 with respect to each of the counties and each of the defendants above named.

(4) In compliance with statutory requirements plaintiff has for many years, including 1933, furnished to the State Tax Commissioner data relating to its assets and liabilities, value of property, earnings, operating and other expenses, and taxes paid, and such other information as said Tax Commissioner has required for the purpose of determining what its annual assessment should lawfully be.

(5) For the year 1933, the State Board of Equalization of North Dakota made an assessment for plaintiff's
56 railway property in North Dakota fixing the value thereof at $78,832,888. Said Assessment was certified out to the several county auditors above named in the amount set forth in paragraph 7 of the complaint herein and as required by the laws of the State. Each county auditor then determined a taxable value for all property in his county, including railroad property at 50% of its full assessed value as required by law and levied a tax against the taxable value of plaintiff's property in his county in the amounts set forth in paragraph 7 of the complaint herein.

(6) The full actual value in money of plaintiff's property in North Dakota in 1933 did not exceed the sum of $47,297,732 upon which amount plaintiff has already paid taxes.

If the above finding be refused, plaintiff requests the court to find as follows:

The said assessment was more than 20% in excess of the actual value of plaintiff's property in North Dakota in 1933.

(7) There is no lawful and rational method of computation or judgment by which a value greater than $47,297,732 for plaintiff's property in North Dakota for 1932 could have been computed.

If finding No. 7 be refused, plaintiff requests the court to find as follows:

There is no lawful and rational method by which a value for plaintiff's property in North Dakota in 1933 could have been computed in excess of 80% of the amount of the said assessment.

(8) In 1932 and for many preceding years the assessments of plaintiff's property in North Dakota had been determined in the following manner:

A value for plaintiff's entire railroad system was determined by capitalizing plaintiff's average net railway operating income for the five years preceding the assessment at the rate of 6% and also by determining the average total market price of plaintiff's outstanding stocks and bonds during said preceding five years and apportioning such total market price as between plaintiff's railway operating property and its non-operating assets in the average of the proportions of their respective earnings and their respective cost or investment. The two values thus determined were then averaged and the average system value thus obtained was allocated to the railway operating property in North Dakota in the average of the ratios that the following
57 units in North Dakota bore to those of the entire system:

Miles of track, car miles and locomotive miles, ton miles and passenger miles, gross revenue, and physical property. In the gross revenue credited to North Dakota for the purpose of fixing this ratio was included a mileage prorate of the plaintiff's revenue on all interstate freight traffic passing into or through North Dakota.

(9) In the year 1933, a similar computation would have produced an assessment for plaintiff's property more than $13,000,000 less than the 1932 assessment, but notwithstanding this, the State Board of Equalization fixed the assessment for plaintiff's property in North Dakota for 1932 at identically the same rate per mile as in 1932.

(10) At all of the times herein mentioned, the plaintiff's railway system has included extensive terminals and costly tunnels, bridges, snowsheds and other mountain construction located in other states with no counterpart in North Dakota and has contained approximately 75% more physical property per mile of all track and nearly twice as much property per mile of road outside North Dakota than inside. As a result of terminal switching, mountain operation and other physical conditions, the average cost of plaintiff's operations per track mile, per car mile, per locomotive mile and per ton mile outside North Dakota has been substantially greater than inside and in the operation of the average locomotive and car mile in freight service outside North Dakota, substantially more tonnage has been moved than in similar operations inside the state. An allocation of plaintiff's system value to the property, in North Dakota upon the ratio described in finding No. 8 has credited to the property in North Dakota many millions of dollars worth of values belonging to properties located in other states and be-

yond the jurisdiction of North Dakota and the assessments based upon said allocations have resulted in effect, for several years last past, in levying taxes amounting to several hundred thousand dollars each year by governmental units in North Dakota against properties located in other states. At all of said times the assessing officers of the State of North Dakota had been and were advised by plaintiff of the facts set forth in this finding.

(11) During each of the years 1928 to 1933, inclusive, not over 13% of the total net earnings and of the total net earning capacity, of the plaintiff's railroad system has been contributed by plaintiff's operating property in North Dakota and accordingly the value of plaintiff's Property in
58 North Dakota has not exceeded 13% of the value of its entire railway system, while the use of the allocation factor mentioned in finding No. 8 has resulted in allocating to plaintiff's property in North Dakota more than 18% of plaintiff's system value.

(If the court is not convinced that the figure of 13% mentioned above is correct, plaintiff requests the court to make the above finding substituting 14%, or if not 14%, 15% for 13%).

(12) A computation of the value of plaintiff's railway system in 1933 by the method described in finding No. 8 would unlawfully increase the assessment of plaintiff's property in North Dakota by giving unjustified weight and effect to high earnings and high stock and bond prices in the years 1928 and 1929, and insufficient weight and effect to the lower earnings and lower stock and bond prices of 1930, 1931 and 1932.

(13) In 1933 and for many years previous, plaintiff owned non-operating assets, not forming a part of its railway system and located outside of North Dakota, having a value in excess of $150,000,000. The apportionment of the total market price of plaintiff's stocks and bonds as between plaintiff's railway system and its non-operating assets in the manner described in finding No. 8, partly in proportion to the respective cost or investment for such properties, would credit too much of the total market price of plaintiff's stocks and bonds to its railway operating property and would produce a computed system value of plaintiff's railway operating property in 1933 several million dollars in excess of its actual value.

(14) The probable prospective rate of return necessary throughout the year 1933 to attract capital for the purchase

of plaintiff's railway operating property was in excess of 7% per annum. A capitalization of plaintiff's actual or prospective net railway operating income at the rate of 6% or at any rate below 7% produced a computed value for plaintiff's railway system many millions of dollars more than its actual value and produced an assessment of plaintiff's property in North Dakota several million dollars in excess of its actual value.

(15) For the year 1934, the State Board of Equalization has fixed an assessment for plaintiff's property in North Dakota several million dollars in excess of any value which could be determined by the method set forth in finding No. 8 and has repeated its assessment, in effect, against property of plaintiff located in other states in the manner set forth in finding No. 8, notwithstanding the fact that
59 said Board of Equalization had previously been advised by plaintiff of the fact set forth in findings Nos. 8 and 10.

(16) At all of the times herein mentioned all other property subject to assessment and taxation in North Dakota was assessed at its true and full value in money. By reason of this fact and by reason of the assessment of plaintiff's property in North Dakota in amounts far in excess of its true and full value in money as above stated, an unwarranted and unlawful share of the tax burden of the State has been imposed upon plaintiff's property and said assessments have materially discriminated against plaintiff as compared with other taxpayers and owners of other property in North Dakota.

(17) The laws of the State of North Dakota impose heavy penalties upon all delinquent taxes and make all taxes assessed and levied against the plaintiff's property a lien against its property prior and paramount to other liens and a cloud upon its title. It is the duty of the defendant county treasurers to collect the taxes above referred to. The plaintiff has no adequate or complete remedy at law and cannot obtain relief except in equity.

(18) Plaintiff has paid 60% of all taxes levied against its property in North Dakota for 1933, which amounts to the payment of all taxes levied against an assessed valuation of $47,297,732. Said last named sum is the maximum amount upon which taxes could lawfully have been levied against plaintiff in North Dakota in 1933 and all further taxes levied as aforesaid are unlawful.

Plaintiff further requests the court to make the following conclusions of law:

(1) All of the assessment against plaintiff's property in North Dakota for 1933 in excess of the amount of $47,297,732 was and is unlawful and all taxes levied by virtue of said unlawful assessment were and are unlawful.

(2) Plaintiff is entitled to an injunction against the defendants and each of them restraining them from collecting or attempting to collect any taxes against plaintiff's property in North Dakota for the year 1933 in excess of the amounts already paid by plaintiff.

(3) Plaintiff is entitled to judgment for its costs and disbursements herein against defendant.

60 Respectfully submitted,

F. G. DORETY,
C. J. MURPHY,
Solicitors for Plaintiff.

All above proposed findings except as are in substance approved in signed findings are refused.

Oct. 24th, 1934.

ANDREW MILLER,
Judge.

—Indorsed on face as follows: "Filed Oct. 24, 1934. J. A. Montgomery, Clerk."

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61 (Findings of Fact and Conclusions of Law of the District Court.)

The above entitled action came on to be heard before the Court at the Court Room in the Federal Building in the City of Fargo, North Dakota, on the 2nd day of October, 1934; Messrs. F. G. Dorety, of St Paul, Minnesota, and C. J. Murphy, of Grand Forks, North Dakota, appearing for the plaintiffs and Messrs. P. O. Sathre, Attorney General of North Dakota, of Bismarck, North Dakota, and Harold D. Shaft, of Grand Forks, North Dakota, appearing for the defendants, and the Court having heard the pleadings of the parties, and the proofs adduced thereon, and having considered the same, the Court now makes the following:

Findings of Fact.

1. Plaintiff is a corporation organized under the laws of the State of Minnesota and now operates and for many years past has operated a railroad extending from St. Paul and Duluth, Minnesota, and Superior, Wisconsin, through the States of Minnesota, North Dakota, South Dakota, Iowa, Montana, Idaho, Washington and Oregon and into the State of California and the Dominion of Canada and lines running into or through thirty counties in North Dakota. Its head office and principal place of business is at St. Paul, Minnesota, and it is and has been engaged mainly in foreign commerce and commerce among the states as a common carrier of freight and passengers by said railroad and to a lesser extent in the transportation wholly within each of the states above named including the State of North Dakota. Its lines of railroad within North Dakota extend into the counties of Barnes, Benson, Bottineau, Burke, Cass, Cavalier, Dickey, Divide, Eddy, Foster, Grand Forks, Griggs, McHenry, McKenzie, Mountrail, Nelson, Pembina, Pierce, Ramsey, Renville, Richland, Rolette, Sargent, Steele, Towner, Traill, Walsh, Ward, Wells and Williams.

2. Defendants are citizens and residents of the state of North Dakota and hold the offices severally designated in the caption hereof. The county officers named in said caption are charged with the duty of enforcing taxes in their respective counties, based upon assessments made by the State Board of Equalization in North Dakota against plaintiff's property. Defendant J. J. Weeks as State Tax Commissioner is charged with the duty of enforcing collection of said taxes in the event of failure of said County officers to collect the same.

3. The suit involved, exclusive of interest and costs, a
62 sum in excess of $3,000.00 with respect to each of the counties above named into which plaintiff's lines of railroad extend, and there is a diversity of citizenship between the plaintiff and defendants requisite to give the Court jurisdiction of the parties hereto.

4. Under the statutes of the state of North Dakota it is the duty of the State Board of Equalization to equalize the assessment of all property in the several counties assessed by the local authorities so that all taxable property in the state, whether assessed by the State Board of Equalization or by local authorities, shall be assessed uniformly according to its true and full value in money. After equalization of the assessment upon all of the taxable property in the state, it is the duty of said State Board of Equalization to certify to each

county auditor the equalized value placed upon all taxable property within each county.

5. For the year 1933, the State Board of Equalization made an assessment for plaintiff's railway property fixing the value thereof within the State of North Dakota at $78,832,888, which said assessment was certified out to the several county auditors above named in the amounts set forth in paragraph 7 of the complaint herein and as required by the laws of the state. Each county auditor then determined a taxable value for all property in his county, including railroad property, at 50% of its full assessed value as required by law and levied a tax against the taxable value of plaintiff's property in his county in the amounts set forth in paragraph 7 of the complaint herein.

6. That at no time within the past ten years has the State Board of Equalization adopted any specific or definite formula or method of calculating the value of the railroads operating in the state of North Dakota, but the State Board of Equalization has at all times had before it, at the time of making such assessments, tables and formulas prepared by the railroads and the office of the Tax Commissioner of the state, and has considered the same in arriving at its assessments, but never has adopted the exact result of any of said tables, formulas or methds of computation of railroad valuations.

63 7. That the assessments of the Great Northern Railway Company's property in the State of North Dakota, made by the State Board of Equalization in the years 1929, 1930, 1931 and 1932 were each and all lawful and justified.

8. That for the year 1933 the State Board of Equalization, after hearing, at which hearing the plaintiff was represented and presented arguments and briefs and computations, fixed the assessment of plaintiff's property at the sum of $78,832,888, which sum was the same as the 1932 assessment except for a deduction of $17,136 for certain trackage of the plaintiff which had been removed.

9. The Court finds that there is no evidence in this case (other than certain evidence offered to show that the assessment was in excess of actual value) that said assessment was fraudulent or made with intent to defraud the plaintiff or that it was made by any unlawful or improper method or in violation of any legislative mandate.

10. The Court makes no finding as to what in the judgment of the Court constituted the full and true value in money of

the plaintiff's property in 1933, or as to whether or not the said assessment was excessive.

From the foregoing Findings of Fact, the Court makes the following:

Conclusions of Law.

1. That upon the record before this Court the assessment for 1933 was not fraudulently, arbitrarily or capriciously made, nor was it the result of a systematic, repeated or continuous practice of over-assessment, and that this court is therefore without jurisdiction to grant the relief prayed for in the bill of complaint.

2. That this action must be in all things dismissed, with costs and disbursements herein to be taxed against the plaintiff.

Dated this 24th day of October, 1934.

ANDREW MILLER, Judge.

Indorsed on face as follows: "Filed Oct. 24, 1934. J. A. Montgomery, Clerk."

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64 (Decree, October 24, 1934.)

This cause came on for hearing before the Court at the Court Rooms in the Federal Building in the City of Fargo, North Dakota, on the 2nd day of October, 1934, the plaintiff appearing by Messrs. F. G. Dorety, of St. Paul, Minnesota, and C. J. Murphy, of Grand Forks, North Dakota, and the defendants appearing by Messrs. P. O. Sathre, Attorney General of North Dakota, Bismarck, N. Dak., and Harold D. Shaft, of Grand Forks, N. Dak., and the parties having submitted their pleadings and proofs and arguments thereon, and the Court having considered the same and having made its Findings of Fact and Conclusions of Law herein, now, on motion of P. O. Sathre and Harold D. Shaft, attorneys for defendants,

It Is Ordered, Adjudged and Decreed that the bill of complaint herein be dismissed for want of equity, with costs to be taxed in favor of the defendants.

It Is Further Ordered that the foregoing decree be suspended and that the temporary injunction heretofore issued herein against the defendants restraining them, and each of them, from proceeding to collect the amount of taxes in controversy in this action, be and the same hereby is continued in force for a period of fifteen days from the date of this decree, for the

reason that the court is advised that immediate appeal is to be taken from this decree, and that irreparable injury might result in the event of an execution issuing pending the taking of such appeal.

Dated this 24th day of October, 1934.

ANDREW MILLER, Judge.

The proposed findings of fact tendered by the complainant, having been considered by the Court and refused, said complainant is allowed an exception to said ruling; and it is

Ordered that the complainant be allowed an exception to the findings of fact and decree which were signed and entered herein.

Dated October 24, 1934.

ANDREW MILLER, Judge.

Indorsed on face as follows: "Filed Oct. 24, 1934. J. A. Montgomery, Clerk."

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65 Petition for Appeal.

To the Honorable Andrew Miller, Judge of the District Court of the United States for the District of North Dakota:

Great Northern Railway Company, your petitioner, who is the plaintiff in the above entitled cause, prays that it may be permitted to take an appeal from the decree entered in the above cause on the 24th day of October, 1934, to the United States Circuit Court of Appeals for the Eighth Circuit for the reasons specified in the Assignment of Errors which is filed herewith.

And your petitioner desires that said appeal shall operate as a supersedeas, and therefore prays that an order be made fixing the amount of the security which said plaintiff shall give and furnish upon such appeal and that upon giving such security all further proceedings in this Court be suspended and stayed until the determination of said appeal by the Circuit Court of Appeals.

And your petitioner respectfully shows that unless the temporary injunction heretofore issued in this cause against defendants restraining them from proceeding to collect the amount of taxes in controversy in this action is continued in force pending the appeal, your petitioner will be done an irreparable injury in the event that its appeal prevails, and

your petitioner therefore prays that said temporary injunction may be continued in force until the determination of this appeal by the Circuit Court of Appeals.

Dated November 7th, 1934.

F. G. DORETY,
C. J. MURPHY,
Solicitors for Plaintiff.

Indorsed on face as follows: "Filed Nov. 8, 1934. J. A. Montgomery, Clerk."

Order Allowing Appeal.

The petition of Great Northern Railway Company, plaintiff in the above entitled cause, for an appeal from the final decree is hereby granted and the appeal is allowed and upon petitioner filing a bond in the sum of Six Hundred Ten Thousand ($610,000.00) with sufficient sureties, and conditioned as required by law, the same shall operate as a supersedeas of the decree made and entered in the above cause and shall suspend and stay all further proceedings in this
66 court until determination of this appeal by the Circuit Court of Appeals.

It is further ordered that the temporary injunction heretofore issued in this cause against the defendants restraining them and each of them from proceeding to collect the amount of taxes in controversy in this action be and the same is hereby continued in force until the determination of this appeal by the Circuit Court of Appeals for the reason that it appears that irreparable injury will otherwise result to the petitioner pending the determination of the appeal.

Dated this 8th day of November, 1934.

ANDREW MILLER,
District Judge.

Indorsed on face as follows: "Filed Nov. 8, 1934. J. A. Montgomery, Clerk."

Assignment of Errors.

Comes now, the said Great Northern Railway Company, Plaintiff and appellant in the above entitled cause and files the following assignment of errors upon which it will rely in the prosecution of the appeal herewith petitioned for in said cause, from the judgment and decree of this court entered on the 24th day of October, 1934.

(1) The court erred in making its finding of fact No. 7 reading as follows: "That the assessments of the Great Northern Railway Company's property in North Dakota made by the state board of equalization in the years 1929, 1930, 1931, and 1932 were each and all lawful and justified," because the great preponderance of the testimony shows that all of said assessments were approximately 50% or more in excess of the actual value of the property assessed and that many millions of dollars in all of said assessments were in effect levied against property located in other states.

(2) The court erred in making its finding of fact No. 9 reading as follows: "The court finds that there is no evidence in this case (other than cer ain evidence offered to show that the assessment was in excess of actual value) that said assessment was fraudulent or made with intent to defraud the plaintiff or that it was made by any unlawful or improper method or in violation of any legislative mandate", because it appears from undisputed evidence or the great preponderance of the evidence.

67 1. that said assessment was at least 70% in excess of the actual value of the property

2. that said assessment was arrived at without any exercise of the function of valuation, and merely by adopting the assessment of a prior year in disregard of the fact that the value of the property had greatly decreased

3. that the assessment of 1932 which was adopted as and for the assessment of 1933 was arrived at by the following wrongful and unlawful methods

a. In effect by assessing many millions of dollars of property located in other states.

b. By attributing to plaintiff's railroad property many millions of dollars worth of values of assets not forming any part of plaintiff's railroad system and not located in any part in North Dakota.

c. By basing the value of plaintiff's railroad too largely upon earnings and stock and bond prices of 1928 and 1929 which did not afford proper evidence of value in 1933.

d. By basing such value upon a capitalization of the earnings of plaintiff's railroad at the rate of only 6%, whereas the undisputed evidence showed that a much higher rate should be used.

(3) The court erred in making its finding of fact No. 10 reading as follows: "The court makes no finding as to what

in the judgment of the court constituted the full and true value in money of the plaintiff's property in 1933 or as to whether or not the said assessment was excessive," for the reason that the court should have found that the said assessment was at least 70% in excess of actual value.

(4) The court erred in making its conclusion of law No. 1 reading as follows: "That upon the record before this court the assessment for 1933 was not fraudulently, arbitrarily or capriciously made, nor was it the result of a systematic, repeated or continuous practice of over-assessment, and that this court is therefore without jurisdiction to grant the relief prayed for in the bill of complaint," because the court should have concluded that the assessment of plaintiff's property for 1933 was fraudulently, arbitrarily and capriciously made, that it was the result of a systematic, repeated and continuous practice of over-assessment and that the court had jurisdiction to grant the relief prayed for in the bill of complaint.

68 (5) The court erred in making its conclusion of law No. 2 reading as follows: "That this action must be in all things dismissed with costs and disbursements herein to be taxed against the plaintiff."

(6) The court erred in entering its judgment dismissing this action and denying relief to plaintiff.

(7) The court erred in not finding that the full actual value in money of plaintiff's property in North Dakota in 1933 did not exceed the sum of $47,297,732, upon which amount the plaintiff has already paid taxes.

(8) The court erred in not finding that there is no lawful and rational method of computation or judgment by which a value greater than $47,297,732 for plaintiff's property in North Dakota for 1933 could have been computed.

(9) The court erred in failing to find that the assessment in 1933 and for many previous years was the result of allocating a system value of plaintiff's railroad to North Dakota in the average of the ratios that the following units in North Dakota bore to those of the entire system:

Miles of track, car and locomotive miles, ton and passenger miles, gross revenue, and physical property, the gross revenue credited to North Dakota including a mileage prorate of plaintiff's revenue on all interstate freight traffic passing into or through North Dakota.

(10) The court erred in failing to find that the assessment of plaintiff's property in 1933 by methods previously used and recognized by the state taxing authorities would have produced an assessment more than $13,000,000 less than the 1932 assessment which was in fact adopted as the 1933 assessment.

(11) The court erred in failing to make plaintiff's proposed finding of fact No. 10 reading as follows:

"At all of the times herein mentioned, the plaintiff's railway system has included extensive terminals and costly tunnels, bridges, snowsheds and other mountain construction located in other states with no counterpart in North Dakota and has contained approximately 75% more physical property per mile of all track and nearly twice as much property per mile of road outside North Dakota than inside. As a result of terminal switching, mountain operation and other physical conditions, the average cost of plaintiff's op-
69 erations per track mile, per car mile, per locomotive mile and per ton mile outside North Dakota has been substantially greater than inside and in the operation of the average locomotive and car mile in freight service outside North Dakota, substantially more tonnage has been moved than in similar operations inside the state. An allocation of plaintiff's system value to the property in North Dakota upon the ratio described in finding No. 8 (assignment No: 9, supra) has credited to the property in North Dakota many millions of dollars worth of values belonging to properties located in other states and beyond the jurisdiction of North Dakota and the assessments based upon said allocations have resulted in effect, for several years last past, in levying taxes amounting to several hundred thousand dollars each year by governmental units in North Dakota against properties located in other states. At all of said times the assessing officers of the State of North Dakota had been and were advised by plaintiff of the facts set forth in this finding."

(12) The court erred in failing to find that during each of the years 1928 and 1933, inclusive, not over 13% of the total net earnings and not over 13% of the total net earning capacity and the total value of the plaintiff's railroad system has been contributed by plaintiff's operating property in North Dakota and that during each of said years the state taxing authorities have assessed more than 18% of plaintiff's system value in North Dakota.

(13) The court erred in failing to find that the assessment here in question was increased many millions of dollars by

wrongfully giving too much weight to the high earnings and the high stock and bond prices of the years 1928 and 1929 and insufficient weight and effect to the lower earnings and prices of 1930, 1931 and 1932.

(14) The court erred in failing to find that the assessment in question included in effect an assessment against several million dollars worth of non-operating assets owned by plaintiff, located outside the State of North Dakota and not forming any part of its railroad system.

(15) The court erred in failing to find that the assessment in question was wrongfully increased many millions of dollars by capitalization of plaintiff's earnings at the rate of only 6%, and that a rate of return in excess of 7% was the lowest rate sufficient to attract capital for an enterprise similar to plaintiff's, and the lowest rate that could justifiably be used in capitalizing plaintiff's earnings.

(16) The court erred in failing to find that the state taxing authorities have repeated the above-mentioned wrongful methods in assessing plaintiff's property in North Dakota for 1934 after being fully advised as to the facts.

(17) The court erred in failing to find that all other property subject to assessment and taxation in North Dakota was assessed at its true and full value in money while plaintiff's property was assessed at approximately 170% of its true and full value in money and that thereby an unwarranted and unlawful share of the tax burden of the state has been imposed upon plaintiff's property and that the assessment in question has materially discriminated against plaintiff as compared with other taxpayers and other owners of property in North Dakota.

(18) The court erred in failing to find that plaintiff has no adequate or complete remedy at law and cannot obtain relief except in equity.

(19) The court erred in failing to conclude that all taxes levied against plaintiff's property in North Dakota for 1933 in excess of those levied against an assessed valuation of $47,297,732 and already paid by plaintiff, are excessive and unlawful.

(20) The court erred in failing to conclude that the collection of the taxes in question in this action would be an unlawful burden upon interstate commerce and would deprive plaintiff of property without due process of law in violation of the Constitution of the United States.

(21) The court erred in failing to conclude that plaintiff is entitled to an injunction against the defendants, and each of them, restraining them from collecting or attempting to collect any further taxes against plaintiff's property in North Dakota, for 1933.

(22) The court erred in failing to enter judgment in favor of the plaintiff for the relief prayed for in the complaint.

Wherefore, plaintiff prays that the said judgment and decree be reversed and for such other and further relief as to the court may seem just and proper.

F. G. DORETY,
C. J. MURPHY,
Solicitors for Plaintiff.

Dated at St. Paul, Minn., October 26, 1934.

71 Indorsed on face as follows: "Filed Nov. 8, 1934. J. A. Montgomery, Clerk."

Supersedeas Bond on Appeal.

Know All Men By These Presents, That we, Great Northern Railway Company, a Minnesota corporation, as principal, and Saint Paul Mercury Indemnity Company, of Saint Paul, a Delaware corporation, as surety, are held and firmly bound unto J. J. Weeks, State Tax Commissioner; J. M. Bailie, as Auditor and L. T. Halverson, as Treasurer of Barnes County; G. A. Gilbertson, as Auditor and W. D. Conway, as Treasurer of Benson County; Ole Colbornson as Auditor and Sam H. Wilson, as Treasurer of Bottineau County; H. F. Magedanz as Auditor and Jerry Donovan as Treasurer of Burke County; F. Ford Doherty, as Auditor and C. A. Baumgartner, as Treasurer of Cass County; Otto Rasmussen as Auditor and A. A. Wilson as Treasurer of Cavalier County; John A. Dawe as Auditor and H. J. Oberman as Treasurer of Dickey County; R. H. Lynch as Auditor and O. A. Steffler as Treasurer of Divide County; S. W. Lyman as Auditor and Hugh Peoples as Treasurer of Eddy County; J. B. McWethy as Auditor and M. P. Roberts as Treasurer of Foster County; Martin O. Haugen as Auditor and John Sanbek as Treasurer of Grand Forks County; P. A. Melgard as Auditor and R. J. Howden as Treasurer of Griggs County; E. W. Olson as Auditor and Oscar R. Fisher as Treasurer of McHenry County; Arne Tollefson as Auditor and Oluf Erickson as Treasurer of McKenzie County; F. J. Haines as Auditor and Nels Hofland as Treas-

urer of Mountrail County; Peter Jorgenson as Auditor and J. J. Schindele as Treasurer of Nelson County; Wm. W. Felson as Auditor and J. H. Hannesson as Treasurer of Pembina County; O. A. Spillum as Auditor and O. T. Tofsrud as Treasurer of Pierce County; J. O. Peterson as Auditor and F. J. Burckhard as Treasurer of Ramsey County; C. E. Colcord as Auditor and W. C. Budke as Treasurer of Renville County; George J. Fischer as Auditor and Karl L. Mikkelson as Treasurer of Richland County; Jas. H. Penny as Auditor and Allister McKay as Treasurer of Rolette County; R. W. Safstrom as Auditor and H. O. Webster as Treasurer of Sargent County; G. H. Mustad as Auditor and Florence Carlson as Treasurer of Steele County; A. T. Mooney as Auditor and John Gang as Treasurer of Towner County; Gerhard D. Olson as Auditor and Thomas P. Strand as Treasurer of Traill County; W. J. LaMarre as Auditor and Benj. A. Gudajtes as Treasurer of Walsh County; A. G. Torgerson as Auditor and Bert A. Balerud as Treasurer of Ward County; Otto G. Krueger as Auditor and Edith Darcy as Treasurer of Wells County; Morton Mortenson as Auditor and Oscar N.
72 Lee as Treasurer of Williams County, all of the State of North Dakota in the full and just sum of Six Hundred Ten Thousand and no/100 Dollars ($610,000.00), to be paid to the said obligees or their successors in office, to which payment well and truly to be made we bind ourselves, our successors and assigns, jointly and severally by these presents:

Sealed with our seals and dated this 7th day of November, 1934.

Whereas, lately in the District Court of the United States for the District of North Dakota in a suit depending between Great Northern Railway Company, plaintiff, and J. J. Weeks, State Tax Commissioner; J. M. Bailie as Auditor and L. T. Halvorson as Treasurer of Barnes County; G. A. Gilbertson as Auditor and W. D. Conway as Treasurer of Benson County; Ole Colbornson as Auditor and Sam H. Wilson as Treasurer of Bottineau County; H. F. Magedanz as Auditor and Jerry Donovan as Treasurer of Burke County; F. Ford Doherty as Auditor and C. A. Baumgartner as Treasurer of Cass County; Otto Rasmussen as Auditor and A. A. Wilson as Treasurer of Cavalier County; John A. Dawe as Auditor and H. J. Oberman as Treasurer of Dickey County; R. H. Lynch as Auditor and O. A. Steffler as Treasurer of Divide County; S. W. Lyman as Auditor and Hugh Peoples as Treasurer of Eddy County; J. B. McWethy as Auditor and M. P. Roberts as Treasurer of Foster County; Martin O. Haugen as Auditor and John Sanbek as Treasurer of Grand Forks

County; P. A. Melgard as Auditor and R. J. Howden as Treasurer of Griggs County; E. W. Olson as Auditor and Oscar R. Fisher as Treasurer of McHenry County; Arne Tollefson as Auditor and Oluf Erickson as Treasurer of McKenzie County; F. J. Haines as Auditor and Nels Hofland as Treasurer of Mountrail County; Peter Jorgenson as Auditor and J. J. Schindele as Treasurer of Nelson County; Wm. W. Felson as Auditor and J. H. Hennesson as Treasurer of Pembina County; O. A. Spillum as Auditor and O. T. Tofsrud as Treasurer of Pierce County; J. O. Peterson as Auditor and F. J. Burckhard as Treasurer of Ramsey County; C. E. Colcord as Auditor and W. C. Budke as Treasurer of Renville County; George J. Fischer as Auditor and Karl L. Mikkelson as Treasurer of Richland County; Jas. H. Penny as Auditor and Allister McKay as Treasurer of Rolette County; R. W. Safstrom as Auditor and H. O. Webster as Treasurer of Sargent County; G. H. Mustad as Auditor and Florence Carlson as Treasurer of Steele County; A. T. Mooney as Auditor and John Gang as Treasurer of Towner County; Gerhard D. Olson as Auditor and Thomas P. Strand as Treasurer of Traill County; W. J. LaMarre as Auditor and Benj. A. Gudajtes as Treasurer of Walsh County; A. G. Torgerson as Auditor and Bert A. Balerud as Treasurer of Ward County; Otto G. Krueger as
73 Auditor and Edith Darcy as Treasurer of Wells County; Morten Mortensen as Auditor and Oscar M. Lee as Treasurer of Williams County, all of the State of North Dakota, Defendants, a decree was rendered against the said plaintiff dated October 24, 1934, and the said plaintiff has petitioned for and been allowed by the Honorable Andrew Miller, Judge of the United States District Court for the District of North Dakota, an appeal to the United States Circuit Court of Appeals for the Eighth Circuit, and a citation has been issued directed to said defendants citing them to appear before the Circuit Court of Appeals at St. Louis, Missouri, within forty (40) days of the date of such citation, and

Whereas, on September 18, 1934, this court issued a temporary injunction against the defendants restraining them and each of them from taking action to collect an unpaid balance of taxes levied against the plaintiff for 1933 in the sum of $603,340.80, pending the further judgment of the Court, which temporary injunction has been continued in effect pending the said appeal.

Now, The Condition Of The Above Obligation is such that if the said plaintiff shall prosecute said appeal to effect, and answer all damages and costs if it fails to make good its plea and if the said plaintiff shall pay said taxes in the event that

the decree of said District Court is affirmed then the above obligation to be void, else to remain in full force and virtue.

GREAT NORTHERN RAILWAY COMPANY,
By F. G. Dorety, Vice President.

Attest:
F. L. Paetzold,
Secretary (Corporate Seal)

SAINT PAUL MERCURY INDEMNITY COMPANY OF SAINT PAUL,
By C. F. Codere, Vice President.

Attest:
M. D. Price,
Secretary (Corporate Seal)

Roy T. Baker,
Countersigned: North Dakota Agent.

State of Minnesota,
County of Ramsey—ss.

On this 7th day of November, 1934, before me, a Notary Public within and for Washington County, personally appeared F. G. Dorety and F. L. Paetzold, to me personally known, who being each by me duly sworn did say that they are respectively the Vice President and Secretary of Great
74 Northern Railway Company, one of the corporations named in the foregoing instrument, and that the seal affixed to said instrument is the corporate seal of said corporation and that said instrument was signed and sealed in behalf of said corporation by authority of its Board of Directors, and said F. G. Dorety and F. L. Paetzold acknowledged said instrument to be the free act and deed of said corporation.

JESSIE O. BOHRER,
Notary Public, Washington County, Minnesota.

My commission expires Aug. 13, 1941.

Here follows the Acknowledgment of Officers of the Saint Paul Mercury Indemnity Company of Saint Paul.

The foregoing bond is approved this 8th day of November, 1934.

ANDREW MILLER, Judge.

Indorsed on face as follows: "Filed Nov. 8, 1934. J. A. Montgomery, Clerk."

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75 Order Extending Time in Which to Perfect Appeal.

It appearing to the Court that the transcript of the evidence introduced at the trial herein cannot be furnished within the time required to file the record on appeal in the United States Circuit Court of Appeals, now, on motion of F. G. Dorety, solicitor for the complainant, and appellant, it is

Ordered that the time in which the record may be filed in the United States Circuit Court of Appeals, be and the same hereby is extended to the 10th day of January, A. D. 1935; and that the time be extended likewise for the preparation and settling, allowing and filing of the bill of exceptions herein, and such other preliminary matters to perfect the record on appeal.

Dated December 10th, A. D. 1934.

ANDREW MILLER, Judge.

Original mailed to the Clerk of United States Circuit Court of Appeals, at St. Louis, Missouri, on the 10th day of December, 1934.

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76 Statement of Evidence.

The above entitled action came duly on for hearing befor the Court, the Honorable Andrew Miller, presiding Judge, at Fargo, North Dakota, on the 2nd day of October, 1934, the plaintiff appearing by its attorneys, Messrs. F. G. Dorety, of St. Paul, Minnesota, and C. J. Murphy of Grand Forks, North Dakota, and the defendants by Hon. P. O. Sathre, Attorney-General of the State of North Dakota, and Mr. Harold D. Shaft of Grand Forks, North Dakota, whereupon the following proceedings were had.

Mr. Sathre: For the record we would urge our special plea to the jurisdiction of the Court. I do not want to enter into any argument on this point, the same point was urged a year ago in the Soo Line case and the Court is familiar with the argument we had at that time, but we do want to urge our objection to the jurisdiction of the Court as set forth on page

two of our answer and as particularly set forth in paragraph F that the plaintiff has a complete, speedy and adequate remedy at law and that the Court has no jurisdiction to determine this matter in controversy. The Court is entirely familiar with our argument.

P. B. BEIDELMAN, a witness called on behalf of the plaintiff, being first duly sworn, testified as follows:

Direct Examination.

By Mr. Dorety:

77 My name is P. B. Beidelman. I reside in St. Paul, Minn., and am Freight Traffic Manager of the Great Northern Railway system. I am head of the Freight Traffic Department and the highest freight traffic officer of the company with the exception of the Executive Department.

I have been in the Freight Traffic Department of the Great Northern Railway for 34 years and have entire charge of all rate matters and freight solicitation. One of my duties is to make yearly forecasts of the freight earning possibilities of the system which are used in determining the expenditures for seasons ahead.

In making these forecasts, we consider the general business situation of the country and while it is largely guess work, our forecasts were surprisingly accurate up to about three years ago. I get monthly reports in which the conditions of different business industries and trends in traffic are touched on. Our men are in contact with traffic managers and executives of business and manufacturing firms. I am also in touch with the passenger, express, mail and other departments, and keep in touch with the earning capacity of those departments.

As to the traffic and business conditions on the Great Northern during 1933, the freight represents 80% of the total earnings and is a very important factor. During the years 1918 to 1927, we handled approximately eight billion revenue net ton miles of freight each year. In 1928 and 1929, the figure ran up to ten billion. It dropped in 1930 to eight billion, 1931 six billion and in 1932 to four billion. It rose to 5,400,000,000 in 1933.

78 For the ten years ending 1927, our freight revenue averaged from $110,000,000 to $112,000,000 per year. In 1928 and 1929, it rose to $126,000,000. In 1932 it dropped to $55,000,000 and rose to $62,000,000 in 1933.

Plaintiff's Exhibit 1 shows the trend of our passenger traffic in number of passengers and revenue per passenger mile for a number of years and also shows the trend of less than carload freight merchandise.

In 1914, which was a peak year, we handled approximately 9,200,000 passengers and earned an average of 2.336c per passenger mile. In 1932, the number of passengers dropped to 845,000 odd and the revenue per passenger mile was slightly in excess of 1914. In 1933, we had a slight increase in number of passengers carried but half a cent decrease in earnings per passenger mile. In 1920 we earned twenty and a half million dollars in passenger revenue which dropped to four million dollars in 1932.

(The document marked "Plaintiff's Exhibit 1" was thereupon received in evidence, and is included herewith).

Referring to the decrease in gross revenue from $126,000,000 in 1929 to $55,000,000 in 1932, I will explain some causes which have resulted in what I consider a permanent loss of revenue. The loss which is due to the universal depression will be recovered if we return to normal business conditions such as existed in 1926 and 1927, but there are certain losses of revenue which will never return. These are due to five causes. One permanent loss is the traffic which has been taken by the Panama Canal. Another is traffic taken by trucks, buses, private automobiles and aeroplanes. Another cause of permanent loss is a diversification of farming. Another is the fixation of rates by regulatory bodies which has not only reduced the rates themselves but reduced the divisions of through rates received by the Great Northern.

79 We have also been affected to quite an extent by the construction of pipe lines which supply natural gas and reduce the movement of coal. Another factor is the increasing use of lignite coal in North Dakota and western Minnesota which supplants coal traffic from the Head of the Lakes. Our earnings on a ton of lignite are considerably less than those on coal from the Head of the Lakes.

Going into these matters more in detail, the Panama Canal moved one and a quarter million tons of intercoastal freight in both directions in 1920. For the year 1930, it moved 10,500,000 tons and for the 12 months ending June 30, 1934 approximately 9,000,000 tons. This has resulted in serious losses of transcontinental rail traffic including that of the Great Northern.

The population of the states bordering on the Pacific Ocean has increased more in the last ten years than any other section of the United States and a great many manufacturing plants formerly located in the central west have moved to California with the result that we no longer handle the transcontinental manufactured products formerly originating in the central west or east and get at most a short haul from California. A very large percentage of the movement from California is by water or truck.

As illustrating the increased movement through the Panama Canal, eastbound flour increased from 65,500 tons in 1926 to 185,000 tons in 1933. Wheat increased from 286 tons in 1926 to 92,700 tons in 1933. Wool, which formerly furnished a very good haul to the Great Northern increased from 15,000 tons through the Panama Canal in 1926 to 38,000 tons in 1933. Wood pulp manufactured on the Coast and moving to points east of Ohio has all gone to the water.

In 1926, the Canal lines handled 362 tons and in 1933
80 94,200 tons. Canned goods through the Canal increased from 450,000 tons in 1926 to 546,000 tons in 1933; smelter products in which we are particularly interested from 6,800 tons in 1926 to 54,500 in 1933; paper and paper goods from 4,048 tons in 1926 to 54,470 tons in 1933.

Some of the Panama Canal increases on westbound traffic were as follows:

Automobiles 1926, 2,600 tons, 1933, 29,800 tons. Corn 1926, 61 tons, 1933, 82,383 tons, in 1932, 116,000 tons. Lubricating oils 1926, 33,873 tons, 1933, 74,140 tons. Sulphur 1926, 97,344 tons, 1933, 122,000 tons.

This tendency of traffic away from the railroads and toward the Canal is due to steadily accelerating tendencies which are getting greater every year and we believe that it is going to continue.

The result of this trend has been that the transcontinental lines have had to make very drastic reductions in their rates in an effort to hold the traffic, so that they are not only losing a large part of their tonnage but also very seriously losing revenue on the tonnage that is left. The rate on canned goods eastbound has been reduced in five years from $1.28 a hundred pounds to 80c.

Truck competition also has not only greatly reduced the total tonnage of freight but has resulted in drastic reduction in rates on the traffic that is left. The truck registration in states traversed by the Great Northern increased from 69,808

in 1920 to 244,068 in 1932. Miles of surfaced roads in states traversed by the Great Northern increased from 24,261 in 1929 to 311,181 in 1932, and this increase has been going forward by leaps and bounds.

Trucks have affected Great Northern earnings on a number of commodities. Receipts of livestock at South St. Paul by truck increased from 34,431 truckloads in 1924 to
81 158,134 truckloads in 1933, while carloads of livestock handled by the Great Northern railroad into South St. Paul decreased from 26,210 carloads in 1925 to 12,479 carloads in 1933 or a decrease of over 50% while the truckloads increased 300% and the number of animals handled by truck increased 900%. Similar conditions exist at other stockyards points on our line such as Sioux City, Sioux Falls, Spokane, Tacoma, Seattle and West Fargo.

Our revenue on livestock has also been affected by the location of packing plants at interior points such as West Fargo, Grand Forks, Watertown, Huron, Butte and Great Falls which reduces the haul into the packing plant and makes it more susceptible to truck competition.

This same truck competition affects us with reference to other commodities such as the movement of merchandise from distributing centers and the movement of manufactured products all over our railroad, with the net result that we not only handled less tonnage but get considerably less money for what we handle.

I cannot get any exact figures on the losses due to pipe line competition but this loss is considerable.

During the last four or five years particularly, we have had a number of rate orders from the Interstate Commerce Commission which have made very drastic reductions in our rates on various commodities. An outstanding example is petroleum products. Serious reductions have also been made by the Commission in livestock rates and class rates and our division of through rates has also been reduced.

Diversification of agriculture has resulted in increased production of dairy products and livestock which are susceptible to truck competition and this has also reduced our revenues.

I undertook to determine how much of this loss in revenue from 1929 to 1932 is due to the depression or temporary causes and might be recovered in a period of prosperity and

how much is due to permanent causes and never can
82 be recovered under any conditions. This is, of course, just a matter of judgment.

With a return of normal business conditions, I estimate that our gross revenue should be approximately as follows:

On products of agriculture approximately $21,000,000 per year which is $5,400,000 under the 1921 peak and $5,000,000 over the 1932 low figure. The permanent loss is due to the diversification that I have already mentioned and government curtailment of crops, and also the processing tax which causes the farmer to haul wheat into a local mill for grinding instead of shipping to central mills. There are also heavy losses on apples and pears from the Pacific Northwest on account of Panama Canal competition and also truck competition. We have reduced rates from 30 or 35c to 22½c per cwt. in an effort to hold this traffic.

On products of animals, I estimate earnings of $3,500,000 in normal times which is a million dollars less than the 1929 peak and the same as our 1932 earnings. The reduction in the estimate from 1929 is due to truck competition, interior location of packing houses and reduction of rates by the Interstate Commerce Commission. On products of mines, I estimate $15,000,000 annual earnings in normal times which is $6,600,000 under the 1929 peak and $9,350,000 above our 1932 low spot. The reduction from the 1929 earnings is due to loss of coal traffic on account of pipe line competition and use of lignite coal. I include in my $15,000,000, $9,000,000 for iron ore. I have made this estimate after discussing future prospects with representatives of the iron and steel industry and think it is a very liberal estimate. On other products of mines, there is a growing tendency to handle smelter products by the Panama Canal, which reduces our revenue.

On products of forests, my estimate is $10,500,000 yearly which is $3,900,000 below the 1929 peak and $6,500,000 over the 1932 low spot. My reduced estimate is due to the
83 fact that our forest products come largely from the Pacific Northwest where the Panama Canal competition has been growing in leaps and bounds so that today we get practically no lumber originating at or near the Pacific Coast and destined to Atlantic Seaboard territory, or to points 150 to 200 miles back. The increase in use of substitutes such as cement and steel replacing lumber and prepared roofing replacing shingles and use of wall board is also a factor in this reduction.

On miscellaneous and manufactured products, I estimate an annual revenue after return to normal conditions of $17,500,000, which is $8,000,000 less than the 1929 peak and $4,700,000 in excess of the 1932 low spot. I have already stated the reasons for this which include Panama Canal competition, location of many factories on the Pacific Coast, truck competition, etc. This classification includes refined petroleum and gasoline which are affected by pipe line competition.

On passenger, mail, express, milk and cream traffic, switching revenue, dockage service and miscellaneous, I estimate future passenger revenue at not over $5,000,000 which is $6,300,000 less than 1929 and a million dollars more than 1932. This reduction is due to bus competition, private automobiles, aeroplanes and the lower level of passenger fares which have been established in an effort to hold traffic.

On mail, I estimate $2,800,000 annually which is $600,000 under 1929 and the same as 1932. This loss is due to our running fewer passenger trains and thereby losing mail revenue. On express traffic, I estimate $1,250,000 annually which is a million dollars under 1929 and $460,000 over 1932. This reduction is due to truck competition, curtailed passenger trains and the substitution of freight service for express service.

84 On milk and cream traffic, I estimate $200,000 annually which is $285,000 under 1929 and $67,000 under 1932. There has been a growing tendency of locating creameries in the interior and the milk moves into the creameries by truck on a relatively short rail movement and this revenue will never be regained.

On switching, I estimate $750,000 annually which is $240,000 under 1929 and $320,000 over 1932. This reduction is due to the decreased volume of freight handled.

On miscellaneous revenues, I estimate $2,500,000 annually which is $3,725,000 under 1929 and $1,160,000 over 1932.

Adding all of these figures to the estimated gross freight revenue, I estimate that the total revenue of the Great Northern Railway Company from all sources after return to normal business conditions such as existed in 1926 and 1927 would be $86,000,000 annually. I would not say that earnings would increase to this amount in one year or 5 years or 10 years or any particular time. I am merely saying that that should be our earning power if and when the United States and the world return to normal business conditions.

I think that that is about all an investor in our securities can look forward to with any reasonable degree of certainty in a period of prosperity.

As to the extent to which different topographical conditions and different construction and operating costs on different sections of the railroads have been recognized in fixing freight rates, the Interstate Commerce Commission in a number of cases have established a higher level of rates west of the North Dakota-Montana line than east of that line. In 179 ICC 571, rates on oil well supplies were 20% higher west of the line than east. In 136 ICC 337, rates on reinforced concrete pipe were made 15% higher west than east. They fix a scale to the North Dakota-Montana line and then say that the same scale will apply beyond but with the added percentage. We call this a laminated scale. They will say to use your lower scale for the full haul and then add an arbitrary amount for the haul in the higher-rated territory.

85 The Court: And just where is that fact pertinent to the tax levy in any one of the states as you view it?

My answer is that in establishing or dividing freight rates recognition must be given to the cost of transportation and investment in the territory traversed. In 203 ICC Reports 299 at 335, the Commission said: "Cost of service including the burden of carrying the necessary investment ought to be the factor of primary importance in fixing the division of joint rates". In this case, the divisions allowed by the Commission were equivalent to a mileage prorate with every mile west of the Missouri river computed at 1¼ miles. They recognized the cost of service and the heavy investment in the mountain lines, and it occurred to me that it was equally pertinent in the assignment of taxes.

In 108 ICC 605, a level of rates was established on cottonseed 15% higher in the west. In 190 ICC 611, livestock rates were made 10% higher in the western territory. In 147 ICC 581 and other cases, the Commission fixed class rates in Mountain-Pacific territory 15% higher than were fixed east of the Montana-Dakota line in 164 ICC 1. In 192 ICC 135, rates on petroleum products were made 10 to 15% higher for the Montana haul than to western North Dakota. In 179 ICC 435 and 192 ICC 599, rates on refined petroleum averaged 10% higher in the west than in the territory east.

To figure a rate under one of these laminated scales you take your through rate for the entire distance at the lowest

scale and then make additions for the portion of the haul in higher-rated territories thus constructing the entire rate.

You could illustrate this by taking 3 strips of paper of different lengths with the longest at the bottom and the shortest at the top, the ends being even at what would be the more distant or the more expensive part of the haul. They are not published that way but this is given recognition in
making the divisions. A mileage prorate of the en-
86 tire rate in such a case would result in apportioning to the lower-rated part of the haul some of the additional earnings that the Commission allowed for the more costly part of the haul. The reason for this lamination is the difference in the cost of the haul in the zone. They also consider traffic density and overhead.

If there were only one line involved, the laminated scale would be spread out over the entire distance.

As to the policy of the Great Northern in these matters, the history of our railroad or the history of any railroad in the west will show that the level of rates in the Mountain-Pacific territory has always been higher than in the prairie territory and in our prairie territory the level of rates increases as you go west from the Twin Cities getting into the more sparsely settled sections of North Dakota and Montana.

Cross-Examination.

By Mr. Sathre:

The increase in Canal tonnage from 1920 to 1932 was not uniform but wherever there was a reduction from one year to another there was a still greater decrease on the trans-continental rail lines. On the whole, there was a very decided increase in Canal tonnage during that period. During the same period, the total operating income of the Great Northern increased from $103,452,937 in 1922 to $125,932,000 in 1929, and between the same years net operating railroad revenue increased from $23,816,899 to $43,000,000 plus. That is before deduction of taxes. However, it has been largely since 1929 that we have felt more intensely the competition of the truck and have been forced to reduce rates very drastically so I think I am warranted in making estimates for the future measured by the trend since 1929. The sharp drop after 1929 and down to 1932 was due both to the economic depression and to the competition from trucks and the increase in Canal tonnage. The increased Canal tonnage from 1922 to 1929 did not reduce our total or net operating

income, but our increases might have been heavier
87 had we had the Canal tonnage which we know we lost.
All railway traffic decreased probably 50% from 1929 to 1932. We were no exception, but the transcontinental lines have suffered more than the others. The increased number of boats in the Panama Canal trade and the tendency to reduce the rates have reduced the transcontinental lines much more than they have any other line in the country. Eastern and Southern lines operating back from the Atlantic Seaboard or the Gulf get something from this Panama Canal traffic while we get nothing. In making my estimate, I assumed that this Congress or the next would give us some regulation of bus and truck traffic, and I have assumed that such regulation would restore some of the revenue which is now being lost.

In these laminated rates we show just the one through rate and not the laminations. The income statements submitted in the tax reports do not show these laminated rates nor the higher rates on traffic in the west. And no information about laminated rates was before the State Board of Equalization in fixing the tax or in making the assessment.

It is true today that transcontinental rates are fixed almost entirely upon a competitive basis with the Panama Canal and without regard to expenses of operation in various states; that is we make them as low as we can and still have some profit over and above what we estimated to be our out-of-pocket cost.

It is not true today that a large share of our interstate business is transcontinental. It is gradually disappearing. There has been a steady decline since even back of 1929, but it has been much heavier in the last five or six years due to the additional boats and the rate reductions.

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88 OSCAR S. BOWEN, a witness called on behalf of the plaintiff, being first duly sworn, testified as follows:

Direct Examination.

By Mr. Dorety:

My name is Oscar S. Bowen. I reside in St. Paul and am Assistant to the Chief Engineer of the Great Northern Railway. I have charge of their valuation.

I have had a total engineering experience in railroad work of 40 years including 7 years before I came with the Great Northern. I was office engineer at Spokane for 2 years and district engineer in charge of all work on 2 divisions for 10

years. I was then made Assistant Chief Engineer and had charge of all work on the system from Williston west for 12 years. Since 1925, I have had charge of valuation work. Prior to 1925, I was the highest engineering officer of the company on the lines west of Williston. I have had charge of considerable construction work.

In my present position, I have charge of all the work that is done by the company in connection with the Interstate Commerce Commission valuations and keeping them up to date and the valuation records are all in my custody.

Plaintiff's Exhibit 2 is a correct map of the Great Northern Railway Company as shown by the red lines.

(The document marked "Plaintiff's Exhibit 2" was offered and received in evidence and is included herewith as Plaintiff's Exhibit 2).

61.7% of the Great Northern lines in North Dakota are classified by the Interstate Commerce Commission as branch lines. On the balance of the system in the United States the branch line percentage is 43.5%. So that there is a very much larger percentage of branch line mileage in North Dakota than on the balance of the system. In general the gridiron lines running north and south on the map are all branch lines.

89 The Great Northern lines in North Dakota are of very materially lighter construction and are very materially less expensive than those on the balance of the system, first, because the topography in North Dakota lends to cheaper construction than in any other state along the Great Northern, and second, because such a large percentage of the lines in North Dakota are branch line construction permitting of steeper grades, more curvature and lighter steel and bridges.

The topography in North Dakota is comparatively level. Minnesota is more rolling and has a number of water courses to cross. North Dakota is more level and has fewer water crossings. In Montana, the construction is very expensive on account of crossing the Rocky Mountains. In Idaho we follow the Kootenai river making construction heavy. In Washington we have the Cascades making the construction in that state exceedingly heavy. Also the crossing of the Columbia river which is rather an expensive part of the line. We have a very small mileage in Oregon and California which is not very heavy construction.

Plaintiff's Exhibit 3 is a correct comparison of the number of units of various classes of physical property constituting the railroad for each mile in North Dakota and on the balance of the system. The total grading in North Dakota is 27,974 yards per mile against 47,044 yards per mile on the remainder of the system. There is only 59.5% as much grading per mile in North Dakota. The percentage of North Dakota to the balance of the system in the different classifications of grading per mile is, common material 72%, hard pan 1.7%, loose rock 82½%, solid rock 4%. The tunnels in North Dakota per mile of road only amount to 4.6% as much as on the balance of the line in lineal feet per mile of road.

North Dakota has 44.6% as many pounds of steel in
90 bridges per mile of road, 50.2% as much timber and 46% as much concrete and 80.5% as much rail and 63.9% as many signals. There are no snowsheds in North Dakota.

(The document marked "Plaintiff's Exhibit 3" was offered and received in evidence and is included herewith as Plaintiff's Exhibit 3).

The fact that even the rails in North Dakota are lighter per mile is accounted for by the larger percentage of branch lines in North Dakota which are constructed generally with rail weighing from 66 to 70 pounds per yard, while the main line of the system in general will run from 90 to 130 pounds per yard. There is no 130 pound rail in North Dakota. The main line in North Dakota will run generally from 90 to 100 pounds per yard. There may be a little 110 pound. In the heavier grade sections on the balance of the system, we have considerable portion of 130 pound rail.

North Dakota has no large car and engine repair shops. They have nothing but small shops capable of making light repairs. The largest and principal shops of the system are located at Superior, the Twin Cities and on Puget Sound. In addition there are quite large engine and car shops in Minnesota, Montana and Washington but none in the State of North Dakota.

There are not as many stations per mile of line in North Dakota as on the balance of the system. In North Dakota there is one station to every 5.668 miles of railway and for the balance of the system, there is one station to every 4.826 miles.

Plaintiff's Exhibit 4 is correct and shows the cost of reproduction less depreciation as found by the Interstate Commerce Commission, plus the net additions and betterments

since that date for some of the larger Great Northern terminals. The Great Northern Railway has terminals on Lake Superior and at the Twin Cities and on Puget Sound
91 out of proportion to the terminals on any other part of the system. These are the terminals that I have shown in Exhibit 4. They have a reproduction cost less depreciation of nearly $69,000,000 which is between 12 and 13% of the total reproduction cost less depreciation of the entire system. As measured by cost that would indicate that between 12 and 13% of the physical properties making up the railroad are located in these terminals. These terminals include 53 miles of road, 10 miles on Lake Superior, 26 miles in the Twin Cities and 17 miles on Puget Sound. In the mileage in the Twin Cities, 8 miles are in St. Paul and 18 miles in Minneapolis. The total value of these terminals divided by the miles of road that they contain gives a value of about $1,300,000 per mile of road.

(The document marked "Plaintiff's Exhibit 4" was offered and received in evidence and is included herewith as Plaintiff's Exhibit 4).

Besides these three larger terminals shown in Exhibit 4, there are about 23 secondary terminals of considerable size scattered along the line both inside and outside of North Dakota. Plaintiff's Exhibit 5 is correct and gives a list of these terminals. There is one terminal for every 383 miles in North Dakota and one terminal for every 330 miles on the balance of the system. The terminals inside North Dakota would compare pretty well with those outside North Dakota as to size and value although we have three terminals outside North Dakota that are very much larger than anything in North Dakota. These three outside the state include very large engine and car shops and might tend to make the general average a little larger outside the state, but I do not think there would be much difference. These three larger terminals that I have just referred to are among those shown on Exhibit 5 and not those shown on Exhibit 4. They include St. Cloud, Minn., Great Falls, Mont., and Hillyard, Wash. Exhibit 6 correctly shows the percentage of main and branch line mileage on the Great Northern system by states.

(The documents marked "Plaintiff's Exhibit 5" and
92 "Plaintiff's Exhibit 6" were offered and received in evidence and are included herewith as Plaintiff's Exhibit 5 and Plaintiff's Exhibit 6).

Exhibit 7 correctly shows the cost of reproduction less depreciation per mile of the Great Northern system by states, including all of these various shops, terminals, stations and

other things that I have referred to. This statement shows that the balance of the system outside of North Dakota has a cost per mile 196% of that in North Dakota, and including the lines in Canada 198% of the cost in North Dakota. In other words, the cost per mile outside of North Dakota is almost twice that in North Dakota.

(The document marked "Plaintiff's Exhibit 7" was offered and received in evidence and is included herewith as Plaintiff's Exhibit 7).

As to whether the construction by the Great Northern Railway Company of additional property outside North Dakota has ever reduced the miles of road outside the state and thereby increased the percent of total miles in North Dakota, I will say that in the State of Washington we first operated over the summit of the Cascades. We later built a tunnel about 2-3/4 miles long reducing the length of the line by 9 miles. At a considerably later date, we constructed a longer tunnel about 8 miles long, reducing the length of the line an additional 8 miles. About that same time we made a line revision west of Leavenworth reducing the length of the line about 1 mile making an aggregate reduction of 18 miles in that vicinity. There are numerous other places on the railroad where we have made smaller reductions of from 1/4 mile to a mile, but this the largest reduction in one location that I have in mind. The total cost of the first three reductions in mileage that I mentioned was about $22,000,000. These reductions had the effect of very much reducing operating expenses and would have the effect of increasing the system net railway operating income and they also increase the percentage of miles of road in North Dakota to those on the system. If miles of road were used as a means of allocating system value, the net result of creating several
93 million dollars worth of additional property in the State of Washington would be to allocate a higher percentage of a higher system value to North Dakota. I think it would be possible for the Great Northern to operate over the Cascade mountains on a 1% grade without using any tunnel, but it would require a line between 80 and 100 miles longer than the present line which is 49 miles from Leavenworth to Skykomish. The road over the top between these points would be approximately three times as long as the present line through the tunnel and a movement over the top of the mountain on such a grade between those points would require three times as many locomotive miles, car miles, ton miles and passenger miles as is required on the present line through the tunnel. The effect of the construc-

tion through the tunnel instead of over the summit is that the percentage of car and locomotive miles and ton and passenger miles operated in North Dakota is increased.

Cross-Examination.

By Mr. Shaft:

In all of these exhibits, I have been discussing miles of road and not miles of all track. I cannot give the number of miles of all track in the terminals listed in Exhibits 4 and 5. When I said there were 18 miles of road in the terminals at Minneapolis and St. Paul that is the distance from the outside limit of the terminal in Minneapolis to the outside limit of the terminal in St. Paul and is the amount of main line operated over. There are a great many other side-tracks and switching tracks in those terminals. If you took all tracks into consideration, the difference between North Dakota and the balance of the system, the number of miles per terminal would probably not be so great. In the great terminals there may be 20 or 30 times as much track as there are miles of road.

94 When I said that the cost of construction per mile of road was twice as great outside of North Dakota as inside, I was referring again to miles of road and not miles of track.

One of the chief purposes of the construction of the tunnel out west was the elimination of snow-sheds. This snow-shed construction has been charged off of our books in our valuation of the railroad, at the completion of the long tunnel. The Great Northern owns its own passenger depot in Minneapolis and has stock in the St. Paul Union Depot Company in St. Paul and own our own freight depot in St. Paul. The only station out west in which we are part owner is in Seattle where we own half of the station. In my valuation of these terminals, I have included only our ownership.

My figures representing miles of road do not include miles owned by other companies over which we operate by trackage rights or which are leased. It includes only what are both owned and used.

Redirect Examination.

By Mr. Dorety:

If in a certain terminal there are 10 miles of road and 20 times as much of all tracks, a locomotive bringing a shipment into that kind of a terminal would move 10 miles, I presume. Locomotive mileage would be measured by miles of road and not by miles of track, and the same would be true

of car miles on cars coming into the terminal and on ton miles and passenger miles. If interstate revenue were allocated in proportion to miles of haul, it would be miles of road rather than miles of all track that would enter into that computation.

95 Recross Examination.

By Mr. Shaft:

The reason for that is that much traffic comes into these terminals from other states so that many tracks side-by-side are required and each train as it comes in is not required to wait for another train to get out but they can all come in there side-by-side.

Mr. W. L. Schoettler, a witness called on behalf of the plaintiff, testified as follows:

Direct Examination.

By Mr. Dorety:

My name is W. L. Schoettler. I reside in Ramsey County, Minnesota and am Assistant Right of Way, Land and Tax Commissioner for the Great Northern Railway Company. I have been with the Great Northern Railway Company for something over 27 years and have held my present position since 1925. I handle all of the reports to taxing officials and attend hearings before tax commissions, state and county boards of equalization, budget hearings and all matters connected with ad valorem taxes on the Great Northern Railway and its subsidiary companies. It has been part of my duty for many years to appear before public taxing authorities along the system to discuss assessments and valuation of the various properties, both of the railroad and the physical property of subsidiary companies whose stocks and bonds are owned by the Great Northern.

There would not be more than 10% difference between the percentage of Great Northern miles of road in North Dakota to the balance of the system and the percentage in miles of all track. If 22% of the miles of road are in North Dakota, the all track mileage percent would be about 20.

Plaintiff's Exhibit 8 is a correct statement of some of the securities of other companies and of other assets owned
96 by the Great Northern Railway Company in 1933 but which were not used as a part of its operating system. I have attempted in this statement to make an appraisal of the value of these securities and other assets. Where the securities had earned any income, I took an average of the

income to the Great Northern Railway Company for a five-year period, in dividends or interest and capitalized it at the rate of 6%. I used a five-year earnings because it has been the general custom in North Dakota to use a five-year period in obtaining an average market value of stocks and bonds. I used the rate of 6% because that has been used as the rate for capitalizing the income of the railway company in determining value. If I were determining the proportion of total value which should be allocated on the one hand to railroad property and on the other to non-operating property, and were determining it by capitalization of the respective earnings, I would use the same number of years and the same rate per cent whatever it would be on both sides.

(The document marked "Plaintiff's Exhibit 8" was offered and received in evidence and is included herewith as Plaintiff's Exhibit 8).

There are some assets shown on Exhibit 8 other than income producing securities. We have some real estate and land grant lands which have some value, although they are not producing income. They have a sales value. In appraising such property, I have put down the assessed value for 1933.

The land grant lands shown in item No. 10 on Exhibit 8, are appraised at an estimated value which I think is very conservative. We own 115,000 acres located principally in Minnesota and appraised them at about $9 an acre. Some of these lands have sold for $20 an acre or better and some of the recent sales have been approximately $9 an acre. Referring to the stock of the Chicago, Burlington & Quincy Railroad Company which is listed in Exhibit 8, I determined the value of that by capitalizing the actual dividends paid to the Great Northern Railway Company, although the earnings of the Chicago, Burlington & Quincy Railroad during the five-year period exceeded the dividends that they paid.

97 Exhibit 9 is a statement showing the assessed value of our railroad property by states and also the percentage that the assessed value bears to the reproduction cost less depreciation of the property in each state. These figures are correct. On this statement in the column under "Assessed Valuation", I have shown the full assessed valuation for each state as fixed by the Central Taxing Board on the operating property of the railroad only, although in some states this full assessed valuation is reduced for assessment purposes before levy of taxes. This statement shows that in 1932 North Dakota assessed our property at 101.02% of

the then reproduction cost while the average assessments in other states were 57.06% of the cost of reproduction. In 1933, the North Dakota assessment was 100.82% of reproduction costs while the other states were 52.32%. In other states, our assessed valuation for 1933 was less than for 1932, the decrease running from 5 to 20%, while in North Dakota there was no decrease except about 2/100 of 1% which was due to the removal of some trackage. The rate per mile in North Dakota for 1933 was identically the same as for 1932, and North Dakota was the only state on the system which failed to recognize that there had been a decrease in value of railroad properties since 1932.

(The document marked "Plaintiff's Exhibit 9" was offered and received in evidence and is included herewith as Plaintiff's Exhibit 9).

The amount of the total tax levied in North Dakota and the amount apportioned to each county as shown in paragraph 7 of the complaint in this case is correct, and this paragraph also correctly shows how the assessed valuation was distributed between the counties and the amount of tax levied thereon by each county.

Referring to paragraph 25 of the complaint tendering the payment of 60% of the tax levied, I will state that the payment of the 60% was completed in all of the counties, and we have the official tax receipts for the payment of the 60%.

98 Plaintiff's Exhibit 10 is a correct comparison of the assessment of Great Northern property in North Dakota with that of other railroads. It shows that the assessment against the Great Northern Railway Company is higher per mile than that against any of the other railroad companies, although the Great Northern has a little larger percentage of branch lines to total mileage in North Dakota than any of the other three roads. And on percent of assessment to reproduction cost it is also substantially higher than the assessment of any other railroad.

(The document marked "Plaintiff's Exhibit 10" was offered and received in evidence and is included herewith as Plaintiff's Exhibit 10).

As to whether the taxing authorities in North Dakota have given any effect to depression or panic prices since 1930 in assessing other properties, there has been a reduction in the assessment of farm lands and also in the assessment of railroads of other companies. In the case of farm lands, there

was a 10% reduction in 1932 and there had been a reduction of about 15% a year or two earlier making a total reduction of about 25%. In 1932, other railroads were given reductions of 5 and 10% and the Great Northern was not given any.

Cross-Examination.

By Mr. Shaft:

It is true that in 1931 the Great Northern assessment was reduced 35/100 of 1% but the other railroads in the state were reduced from 4 to 8%. In 1932, there was a 5% reduction in the Great Northern assessment for valuation, but the other railroads were decreased from 10 to 15%. These reductions tended to bring the other railroads nearer to some computations which had been made by the Tax Commission upon the basis that has been followed for some time in North Dakota. There are some methods which have been quite generally used in the different states, but the assessment has usually been modified to fit the particular conditions existing upon each railroad and the assessment announced is
99 not generally the exact result of any computation. These computations and formulae are of more or less arbitrary nature. We are attempting to arrive at market value of something that is not bought and sold by various formulae. Computations are made to set up limits between which values are to be found, and the Great Northern Railway with other railroads has made use of these formulae before the North Dakota Tax Commission. These formulae embody methods for allocating railroad values to various states and the Great Northern has used such formulae before the North Dakota Board of Equalization. We have called the Board's attention to the fact that the cost of reproduction was set up in the report as requested by the Tax Commissioner, and we have at times set out the exact ratio on cost of reproduction that North Dakota would be entitled to have of system value. On other occasions we have entirely eliminated cost of reproduction. There was a time in the past when the report to the Tax Commissioner did not ask for cost figures and since that time we have supplied the information, but I do not recall that we have always made specific mention of it when appearing before the State Board of Equalization. Cost of reproduction is one of the factors that should be considered although maybe not the most important one.

The only item in Exhibit 8 where I used an estimated value based on anything but the assessed or the capitalized value is item No. 19 land-grant lands which are not locally assessed by the terms of the grant. The purpose of valuing the non-

operating property in this exhibit is to make a deduction from the stock and bond value of the entire Great Northern property. The stock and bond value of the Great Northern represents both operating and non-operating property and it is necessary to eliminate the non-operating property as otherwise there would be a double assessment of the same property.

100 In capitalizing railroad income at 6% in order to determine system value, we include income which is applicable to bond interest as well as to dividends on stock. It is the net railway operating income. The 6% is just about a good return as near as I would say. If it were to be a return to the investors it would probably be something different than 6%. When we capitalized the net earnings at 6%, we are capitalizing all of the earnings available for the payment of bonds as well as dividends. As to whether bondholders are willing to accept four or five per cent on the investment, that depends upon the company. The Great Northern series A bond has a rate of 7% and is selling below par. Stock purchasers require a much higher rate of dividends than bondholders. I should judge that an investor in Great Northern stock today would want at least 10 or 15%.

In capitalizing the earnings of stocks and bonds owned by the railroad in Exhibit 8, I have used 6% regardless of whether it is stock or bonds. The largest single item of non-operating property owned by the railroad is the C. B. & Q. stock which includes about 48 or 49% of all the common stock of the C. B. & Q. The Northern Pacific Railway owns the same amount as the Great Northern. The Burlington has an independent operation. I capitalized the dividends paid to the Great Northern at 6%. I did not consider whether the ordinary investor in stock would require a much higher rate of return and made no study of each individual security as to that. This stock has no open market. I do not think it is fair to use a much higher rate of interest than 6%. The Burlington has some outstanding bonds which would come ahead of the common stock. I cannot say what return they bring.

101 The Great Northern Series A bonds were issued in connection with the refinancing of the old NP-GN-CB&Q Joint Collateral Trust bonds. Those bonds are selling a little less than par and pay 7%.

As to whether the earnings on the stock should be capitalized at a higher figure than 6%, I think that if you were capitalizing the net railway operating income to determine value at a higher rate, perhaps a higher rate of interest should

be used on these securities. I think it is generally true that ordinary purchasers of stock require a higher return on the money than purchasers of bonds, but I have made no attempt to capitalize earnings on stocks at a higher return than 6%. The largest item of our non-operating property are stocks and bonds because of the Burlington stock and most of the other items on Exhibit 8 consist entirely of stock, but I have used 6% throughout.

In the case of Item 10 on Exhibit 8, which is the stocks and bonds of the Spokane, Portland & Seattle Railway Company, I have used the assessed values of those properties, but I did not include the assessed valuation of the locally assessed properties which is considerable but only the operating property. We own one-half of that and the Northern Pacific owns the other half. I made no attempt to compute what that property would be worth by capitalizing its earnings at 6%. The bonds have paid some interest, but I do not know just how much. The stock has not paid any dividends recently. If I capitalized the income from this particular investment it would probably produce a figure much less than the assessed valuation, but I could not say to what extent. The assessed valuation of the S. P. & S. properties has been much reduced in recent years partly by action of the court. I think that the S. P. & S. has kept up its interest payments,
but I am not positive as to that. I have not the records
102 with me. I do not know whether it skipped 1930 or not.
As to Item No. 5 on Exhibit 8, the Dakota & Great Northern Townsite Company, that Company holds a lot of property for sale and future development. I have taken the assessed valuation of the property standing of record in the name of the Townsite Company and have made no effort to capitalize its earnings.

Referring to Exhibit 9, I think that some years ago in Idaho some of the assessors stated that property was assessed at about 50% but for the last two years, the assessors have maintained that they assess at a full 100% and in some cases more than 100%.

Referring to the Great Northern assessment shown in Exhibit 10, I assume that the State Board had something on which to base their value, but the assessment is greatly in excess of the computed values submitted to the State Board. I rather think that the net operating income is higher for the Great Northern than the other roads as we have had very low operating expenses. I think that our operating ratio was lower than the other railroads.

At the meeting of the State Board of Equalization at which the 1933 taxes of the Great Northern Railway were considered, I was present and filed a brief setting forth the stock and bond values of the Great Northern Railway for the 5 years prior to November 1, 1932, and also the deduction of the non-operating assets and also a valuation of the system by capitalizing the net railway income at 6%, and I then took a straight average of these two values and then allocated the value of the entire system to North Dakota by four factors and also three factors. The four factors were the mileage of all tracks, car and locomotive mileage, revenue and traffic units and gross operating revenues. We also called attention to results that would be obtained by using other factors and that the physical property ratio was less than the ratios set forth in the tabulation. I do not recall any other
103 factor that was used.

Redirect Examination.

By Mr. Dorety:

The Spokane, Portland & Seattle Railway Company is a jointly-owned property and has considerable physical property and undoubtedly brings traffic to the two owning companies.

The Great Northern owns additional non-operating assets other than what are listed on Exhibit 8. There are some million dollars or more book value that is not included in this estimate. I have not attempted to make a complete list but just took the principal assets.

I know of no case in my experience where an assessed valuation in any state was the exact result of any mathematical computation and formula. The use of the formulae varies in different states and the assessment is usually different from the computations. When I say that a certain formula is used in a particular state, I mean that the statisticians have usually set out a number of computed values which are averaged and sometimes the assessment is entirely different from any of them.

If the method which is advocated by the defendant in its answer in this case were applied in the State of Washington, such a computation would produce a value considerably less than the present assessed valuation. The assessments actually being made in Washington exceed such a computation by 30 or 35%. They give considerable weight to cost of reproduction.

Recross Examination.

By Mr. Shaft:

These formulae are attempts to find and estimate a value for the operating property and are useful in fixing the assessment. So far as I have been able to discover, no method has yet been developed which can in an exact scientific manner fix the true value of the state's share of an interstate railway. In each case all the surrounding facts and circumstances, the conditions and the times and all that sort
104 of thing have to be taken into consideration in order to arrive at a reasonable approximation of true value, as well as the peculiar conditions of each road.

Whereupon it was stipulated between the parties that in an action brought by Minneapolis, St. Paul & Sault Ste. Marie Railway Company contesting the assessment of the operating property of that company in North Dakota for 1933, the assessment was reduced by agreement of the parties, after the 1932 assessment against the same property had been declared invalid by the court.

Oscar S. Bowen was recalled as a witness on behalf of the plaintiff and testified as follows:

Direct Examination.

By Mr. Dorety:

Referring to the three larger terminals at the Twin Cities, Superior and Puget Sound shown in my exhibit 4, I find that there are 158 miles of all track in the Superior-Allouez terminals, 266 miles of all track in the St. Paul-Minneapolis terminals, and 113 miles of all track in the Delta-Everett and Seattle terminals, a total of 537 miles of all tracks as compared with 53 miles of single main line or about 10 times as many miles of all track as of road miles. The reproduction cost less depreciation in these terminals per mile of all track is $114,000 at Superior-Allouez, $120,000 at St. Paul-Minneapolis and $166,000 at Delta-Everett and Seattle, the average for all being $128,000 per mile of all track. Averaging sidetracks, loading tracks, house tracks and everything else in these larger terminals, including main lines the average value per mile is a little over three times as much as the average mile in North Dakota.

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105 V. P. Turnburke, a witness called on behalf of the plaintiff, being first duly sworn, testified as follows:

Direct Examination.

By Mr. Dorety:

My name is V. P. Turnburke. I reside in St. Paul and am General Auditor of the Great Northern Railway Company. I am a graduate civil engineer and have been engaged in rail road engineering for 4 years and in statistical work for the past 18 years. I have been statistician for the C. M. & St. P. Ry. Co. and the Great Northern Railway Company, and during the War was manager of the Operating Statistics Section of the United States Railroad Administration at Washington. As General Auditor of the company, I have in my custody all of the various records and books of the company and have had general supervision of reports made to the various state railroad commissions and the Interstate Commerce Commission.

When the North Dakota tax authorities used the proportion of gross revenue in North Dakota to that on the system as one of the five factors of allocating system value to the State, they get the gross revenue for North Dakota by taking a mileage prorate of the interstate freight revenue on each interstate shipment moving in any part in North Dakota and add to that the total intrastate revenues in North Dakota.

The Great Northern Series A 7% bonds referred to in Mr. Schoettler's testimony are secured by pledge of the Burlington stock owned by the Great Northern, which is pledged to secure all General Mortgage Bonds of the Great Northern amounting to about $200,000,000. These Series A bonds are likewise secured by the physical railway system of the Great Northern which underlies all of the General Mortgage Bonds.

106 Referring again to the matter of allocating interstate revenue which I was speaking of, when a freight rate on interstate traffic is made on a laminated scale as described by Mr. Beidelman, the total revenue is prorated to North Dakota on a mileage prorate basis including a mileage prorate of both the underlying rate and the overlying or laminated rate at the higher figure. The entire revenue is prorated in that case on a mileage basis just as it is in every other interstate shipment.

I have prepared plaintiff's Exhibit 11 in order to show how in my judgment the total revenue on that kind of a shipment should be allocated in proportion to cost of service and also how it is allocated on the mileage basis. This shows a shipment moving through the States of Washington, Idaho, Montana, North Dakota and Minnesota, and I have assumed

it to be a shipment moving under a laminated rate scale to which the additional layers of revenue have been added in the states of higher cost, so that the total revenue is just sufficient to pay the total operating expenses plus an allowance for the use of property, which I have assumed to be 4%. This Exhibit 11 applies to a 30 ton shipment as an example, and in column 1 is given the approximate miles hauled in each state. Column 2 shows net ton miles and is the product of the 30 ton shipment times the miles in each state as shown by column 1. Column 3 shows the operating cost per hundred net ton miles, and column 4 shows the allowance for use of property at 4%. The operating costs shown in column 3 are round figures but are approximately correct, as is the allowance for use of property in column 4, the 4% being applied to the actual value of the property in these states.

Column 5 shows the total operating expenses for the entire shipment and is obtained by multiplying the ton
107 mile cost in column 3 by the ton miles in column 2. Column 6 is a similar procedure for the use of the property. The total cost for handling the car including the allowance for the use of the property is shown in column 7 which is the sum of the two previous columns. Out of a total cost in column 7 of $480, the cost applicable to each state is shown.

Now if the mileage prorate basis of dividing this through revenue of 80c a hundred or $16 a ton, which produces a revenue of $480 for the shipment, were used, 4/18 of the total revenue would be assigned to Washington which is the ratio of the Washington miles hauled in column 1 to the total miles hauled. A mileage prorate for all of the states is shown in Column 8. This gives North Dakota the same allotment of revenue as Washington although the cost of the service in North Dakota is just half the cost of Washington. Column 9 shows that the amount of revenue assigned to Washington on a mileage prorate is less than the actual operating expenses so that the mileage prorate basis says in effect that Washington should not be assigned enough revenue to pay its operating expenses and that North Dakota should be allowed a sum sufficient to pay its operating expenses and a return of 7.8% on the property used. Minnesota would receive a return of 9.7% although the total shipment produces a return of only 4% for the entire movement. Now this is exactly the situation that exists when the interstate revenues are assigned to the states on the basis of the mileage prorate and in our returns to the State of Washington, the

assignment of revenues on that basis in the aggregate on all business is not sufficient to pay the operating expenses incurred in that state, although there was actually net money made on the system operation.

If this method of allocating interstate revenue in proportion to the cost of producing the service were to be used in tax cases, I would not say that it would be necessary
108 to go through the same process which I have gone through here as to every individual interstate shipment. The same result can be accomplished substantially much more easily by making the same kind of a computation on the interstate traffic of the state as a whole instead of determining the ton miles per state on each shipment and multiplying them by the cost as I have done in Exhibit 11. It would be easier and more practical and substantially as accurate to take the total ton miles of all interstate freight traffic moving in the State, which is already shown in our public reports, and multiply that figure by the average cost. This would show the total cost for each State incurred in the movement of all the interstate freight traffic and the total interstate freight revenue on the same traffic for the system could then be apportioned to the different States in proportion to the total cost incurred in each State for producing this service.

By working it out on the basis of the total ton miles in each state as I have just described it I would not get identically the same result for each state to the last dollar and cent that I would get by allocating each individual movement separately, but it would be the same if the revenue for each shipment bore the same relationship to the cost of each shipment. This, of course, is not so as to every shipment as some rates are higher in proportion to cost than are others. However, it is generally true as pointed out by Mr. Beidelman that it has been the policy of both the company and the Interstate Commerce Commission to increase rates in the higher cost territory in order to cover the increased cost and while there may be individual rates that are higher or lower than others in proportion to the net or in proportion to the cost, thus giving a different net, I believe that when you take the total traffic of all kinds passing through any one State we will find that the total revenue bears about the same relationship to the total cost in all cases. And to the extent that that
109 is true, my short-cut method of taking the total ton miles in the state would produce exactly the same result as allocating each shipment individually, and that is particularly true of the State of North Dakota, which par-

ticipates in practically every kind of interstate shipment of this system. It is a State that is intermediate between our terminals The lumber business, the apple business, the manufactures, grain business, all of our heavy revenue producing commodities, not meaning each shipment but the general commodity movements, of the Great Northern, pass through the State of North Dakota, and the only commodity that I know of that moves in any substantial volume that does not move through North Dakota is the iron ore on our Mesabi division and to certain extents the heavy coal movement between the head of the Lakes and Minnesota points, although there is coal movement into North Dakota.

This class of traffic that does not move into North Dakota like the ore and the coal is in general more profitable than the other traffic on the system, and including that traffic and the revenue therefrom in the interstate revenue and traffic for the system simply increases the allowance that goes to the State of North Dakota on that basis.

I determine that the traffic on the Mesabi division is more profitable than on the system because by computing the system figures, eliminating the Mesabi division entirely, both its revenue and its expenses, it will be found that a smaller assignment of revenue would be made to North Dakota than on the basis of including the entire system operation including that division. It is correct to say that, to the extent that a general allocation by total ton miles in each state would vary from the separate computation of each individual shipment, the result in North Dakota would be favorable rather than unfavorable to North Dakota.

110 (The document marked "Plaintiff's Exhibit 11" was offered and received in evidence and is included herewith as Plaintiff's Exhibit 11).

I have made a computation of the interstate revenue that should be credited to North Dakota, if it were allocated in proportion to the cost of the service by using the general method that I have just described. This computation appears in plaintiff's Exhibit 12. Page 2 of this exhibit shows the division of interstate freight revenue on a basis of cost. This is marked Schedule B.

This page, Schedule B of the exhibit, relates to freight operation, the upper half is for the years 1928, 1929 and 1930 and the lower part for 1931 and 1932, with an explanation of the source of each of the items. I might here explain that there are certain other work sheets that are re-

ferred to as Schedule C, for example, that have been furnished the State day before yesterday and that are merely working sheets on which some of the basic data is put together to bring forward on this Schedule B.

For each year there are three columns of figures, the first representing the system, the second North Dakota and the third the balance of the system excluding North Dakota, which is the difference between column 1 and 2. The freight operating expenses shown on the first line are those reported in the annual report to the Railroad Commissioners of North Dakota. The matter of equipment, freight proportion, and the joint facility rents, freight proportion, is the payments made by the company for the use of the property of others, the system figures being reported to the Railroad Commissioners of North Dakota and the North Dakota proportion being obtained on the relationship of the relative freight car miles made in North Dakota as compared with those of the system. In the case of passenger equipment on the basis of the relative passenger train car miles; in the case of the locomotives on the basis of the locomotive miles and
111 in the case of the other equipment, mostly work equipment, on the basis of the work service train miles. All of these car miles, locomotive mile and train mile figures are reported in the annual report to the Railroad Commissioners of North Dakota for both North Dakota and the system. The rents from locomotives and from work equipment must be divided between freight and passenger and that is accomplished on the basis of the operating expenses, relative operating expenses, the freight proportion and the passenger proportion, all of that is done on Schedules C, D and E, which as I say are part of the working papers, but have been furnished the State two days ago. In the case of the joint facility rents the amount shown to North Dakota is a credit and that is a collection that the Great Northern makes for the joint use of some of its property in North Dakota by other carriers, whereas for the system it is a debit. Now a word about line 4, the allowance for use of property based on the I. C. C.'s cost of reproduction new, less depreciation, plus additions and betterments since valuation date, freight proportion. In the report to the State Tax Commissioners there is shown the I. C. C. cost of reproduction new, less depreciation, plus additions and betterments, since valuation date, for both the State of North Dakota and the system, with the single exception of the year 1932, in which case all the basic information was supplied but the computation of the depreciation on equipment in North Dakota was not made, but than can very

readily be made. As to the rate of return which I have used, in each year I have used that rate of return which the system actually earned during the year and not an arbitrary 5¾% or 6% or any other per cent, but have allowed for the use of property for both the system and North Dakota the same rate of return as was actually earned during the year in question from the operations of our property.

112 When I speak of the amount actually earned, that is before payment of taxes, I have left out the taxes from this Exhibit 12 on the grounds that we are trying to determine a fair allowance for taxes and if our claim is correct that the taxes in North Dakota are over stated, then including taxes would give North Dakota disadvantage, so by leaving the taxes out a more favorable result is obtained for the State of North Dakota. Now having determined the allowance for the use of property, that allowance was divided between freight and passenger on the basis of the relative freight and passenger operating expenses in both North Dakota and for the system. That basis of division is one generally recognized, and the Courts have held that a division should be made on the basis of use of the property and it has been determined by those familiar with this kind of work that the operating expenses are the best measure of the use, the more dollars being spent in freight service is evidence that more use is being made of the joint property for the benefit of the freight service, so that the figures on Schedule B, Sheet 2 of Exhibit 12, all relate only to the freight operation. Now having totaled on line 5 the first four items, that is, the freight operating expenses, equipment and joint facility rents and the allowance for the use of property, the average cost per 1000 revenue net ton miles, Line 7, is determined by dividing line 5, the total cost, by the revenue net ton miles, which are shown in line 6 and are contained in the annual report to the Railroad Commissioners of North Dakota for both North Dakota and the system. The average costs are shown on line 7 and the interstate revenue net ton miles, line 8, is then multiplied by the cost per 1000 revenue net ton miles, line 7, to determine the cost of handling interstate traffic, line 9. The difference between the interstate revenue net ton miles and the total net ton miles, that is line 8 and line 6, is represented by the intrastate net ton miles.

113 The total cost of handling interstate traffic, both in North Dakota and out of North Dakota, is thus developed on line 9, and line 10, which shows the interstate freight revenue for the system is divided between North Dakota and the balance of the system on the relative basis of the cost of handling the interstate traffic, line 9, all of which

is shown on line 11 of page 2, Exhibit 12. This division of interstate freight revenue on the basis of cost assigns to North Dakota about twelve or thirteen per cent less revenue than the total revenue assigned to that State if the interstate revenue were divided on a mileage prorate.

My computation of the total cost to North Dakota of handling all the interstate freight that passed into or through that state is shown in line 9, column 2 as $14,190,493. The total amount of the interstate freight revenue that I allocate to North Dakota in proportion to that cost is shown in Item 11, Column 3 as $14,338,757. This last figure is the objective of my whole computation and it includes full allowance for the operating expenses and the use of the property.

Now having found for the year 1928 that North Dakota earned $14,338,757 in interstate freight traffic, that figure is brought over to page 1 of Exhibit 12, Schedule A, and added to the intrastate freight revenue as reported to the Railroad Commissioners of North Dakota and all other operating revenues, that is passenger, mail, express and so forth, both intra and interstate as reported in the annual report to the Railroad Commissioners of North Dakota, to produce the total operating revenues, item 1 C, assignable to North Dakota, which for the year 1928 was $19,613,435.00.

In the line numbered with an Arabic 2 under a Roman I, which is the second line of figures under the year 1928, "Interstate Apportioned on Cost Basis" is that same figure $14,-
338,757 which is the figure that I developed on page 2
114 and then took over to page 1. All the figures on line 2 of page 1 are developed in line 11 on page 2.

Now after having developed on line I C the total operating revenues in North Dakota for each year, I then subtract from the total operating revenues the total operating expenses in North Dakota as reported in the annual report to the Railroad Commissioners of North Dakota to obtain item 3, the net revenue from railway operations. From this latter figure is deducted a small amount for the uncollectible railway revenue proportion belonging to North Dakota, an allowance for equipment rents and added thereto is an allowance for the joint facility credits divided to North Dakota on the basis of the freight car, passenger car and locomotive miles and so forth that I have previously explained. Those figures are total for both freight and passenger, to obtain the item 8, the net railway operating income excluding taxes assignable to North Dakota. Item 8 corresponds exactly with the net railway operating income, which is the measure of the net rev-

enue resulting from the railway operations and has been used as the basis in measuring the fair return by statute and has been used as a measure of the rental to be paid to the carriers for the use of their property during Federal control, with a single exception, that item 8 does not include a deduction for taxes, which, of course, must come out of this net before the actual net operating railway income is obtained. However, I take the system net operating income, line 9, which includes a deduction for taxes and add back the railway tax accruals to obtain line 11, which is the net operating income for the system, excluding taxes, that is on the basis of the same items as is included in item 8 for North Dakota, and the last item of page 1 of Exhibit 12 shows the percent of the system net operating income, excluding taxes, that is
115 earned in North Dakota with the interstate revenue apportioned on a cost basis. This per cent varies from 11.37, the low in 1931, to 12.82 in 1928, with an average of 12.22 for the five years and 11.71 for the three years, all of which is shown on the last line of page 1 of Exhibit 12.

All of the revenue and expense figures on page 1 of Exhibit 12 are taken from reports either to the state commissions or the Interstate Commerce Commission, except that one figure of interstate freight revenue which I developed on Sheet 2. And I might say that this method of apportioning revenues on a mileage prorate which has been used by the carriers in making the returns to the Commissions of all the States is largely as a matter of convenience. The State Commissions' reports require that the carrier show its interstate freight revenue applicable to that particular State. No directions or methods are specified by the Interstate Commerce Commission or any State, but for the State of Minnesota the taxes are levied on a gross earnings basis and the statute requires that the method of determining the gross earnings applicable to Minnesota on which those taxes shall be figured is the mileage prorate basis, so being compelled to analyze the accounts and separate out the Minnesota freight revenue on the basis of a mileage prorate it was a simple matter to extend the same system to the other States and divide them all uniformly. However, I might say that in connection with our reports to the State Railroad Commissioners of each State we have protested that the method which we were using in separating interstate freight revenue was not a correct one but was simply being returned as a matter of record, and I would like to read into the record a copy of the protest, which appears on page 700 of the annual report of the Great Northern Railway Company to the Board of Railroad Commissioners of the State of

North Dakota for the year ending December 31, 1932,
116 and which protest is identical with that appearing on the similar page in the reports to those Commissioners for other years and to the Railroad Commissioners of other States. "The revenues from transporation shown above as derived from interstate traffic are compiled upon a straight mileage basis and are given under protest for the reason that this company does not consider that that basis accurately produces the revenues in North Dakota from such traffic." Now, as I have stated before, I have not included taxes in this exhibit anywhere because they are in dispute. If the proper amount were known they should be included, because the revenues must in the last analysis pay the taxes, but the proper amount of taxes is dependent upon the proper proportion of the system value and the proper proportion of the system value cannot be determined until the interstate revenue is properly apportioned, and, therefore, it is necessary to exclude the taxes from this computation, but it is excluded from both the figures for North Dakota and the figures for the system. If the taxes were included the North Dakota proportion would be smaller than those shown on Exhibit 12. For the year 1930, for example, which is the nearest year to the average of the five years so far as net earnings are concerned, the proportion accruing to North Dakota if you include taxes would be 11.02% instead of 11.91 as shown in the last line under the column headed 1930 on the first page of Exhibit 12. In fact in the year 1932 the railway tax accruals applicable to North Dakota were nearly double the net operating income before taxes that was available from operations within the State of North Dakota with the interstate revenue derived on a cost basis as I have done.

117 There are no rules or provisions in the freight tariffs or other records or practices of the Great Northern Railway Company providing for a mileage prorate or any other prorate of the through freight revenues as between states and none of the freight rates of the Great Northern Railway Company are published on the basis of the same amount for each mile of the movement. The Great Northern Railway Company has not received any instructions from public authorities of North Dakota or from the Interstate Commerce Commission or other public authorities for determining how much of the revenue on through freight shipments should be credited to any particular state, and the Great Northern does not for its own purposes or for any purpose other than the reports to state tax commissions that I have referred to, make any division or allocation on interstate

freight shipments through states, except the mileage prorate that I have referred to. In a rate case involving rates in the State of Minnesota where the allegation was made that the mileage prorate basis had to be returned to the State of Minnesota because it was compelled by the statute for determining the gross earnings for taxation purposes the statistician for the Railroad and Warehouse Commission under oath denied such an allegation and stated that as there were no rules prescribed for apportioning the interstate revenue, carriers were at perfect liberty to report anything that they saw fit under this heading and that they were not bound by the mileage prorate basis even in the State of Minnesota.

(The document marked "Plaintiff's Exhibit 12" was offered and received in evidence and is included herewith as Plaintiff's Exhibit 12).

As to my criticism of a straight mileage proportion of interstate revenue to individual states, the straight mileage prorate assumes that every mile of road over which a shipment moves contributes as much to the total transportation
118 service rendered as every other mile. This, of course, is manifestly not so, first, because it costs more to operate some miles than others, such as a mountain operation versus a level plain operation, and, secondly, because the investment is greater in some miles than in others. Now I have referred to the iron ore movement in Minnesota, which originates in the Mesabi Range and moves to our docks at Allouez, Wisconsin. The movement is approximately ninety miles in the State of Minnesota and ten miles in Wisconsin, but the construction costs of the ninety miles are about the same as the construction costs of the ten miles, because the ten miles include five large concrete and steel ore docks, yards for classifying the freight before moving on the docks and sundry other terminal construction. The cost of operation of the ten miles in Wisconsin I would say was somewhere in the neighborhood of one third as much as the cost of operating the ninety miles in Minnesota, so that with a fifty per cent of the investment in Wisconsin and one-third of the operating cost the value of the transportation service contributed by Wisconsin should be somewhere between those two figures, possibly forty to forty-two per cent, but the mileage prorate of assigning revenues gives Minnesota 90% and Wisconsin 10%, so that the mileage prorate would in effect make a large deficit in Wisconsin and show a tremendous profit in Minnesota, although as a matter of fact the traffic itself is only returning a fair return, and that is exactly what the reports to the State of Wisconsin show, in many years they show that the assign-

ment of revenues to that State are less than the operating expenses in the State, notwithstanding there was net made on the system, similar to the reference I have made to the State of Washington. If independent companies were operating these two properties, that is, the Minnesota end versus the Wisconsin end, the Wisconsin company would not be content with accepting a mileage prorate, it would have to get a division of the rate based upon its cost and value of its property,

119 and at one time there were separate companies operating the docks from those handling the line haul and the division was not on a mileage prorate but the division at that time was about 40% to the dock and 60% to the line haul, so that this method of determining the net earnings in the State of North Dakota is exactly the same result that would obtain if the properties in North Dakota were operated as a separate entity that had to stand on its own bottom along with the rest of the system, allowing North Dakota full allowance for its operating expenses and for its interest on its investment the same as allowing other States through which this interstate shipment passes. Of course, North Dakota gets full benefit of all its intrastate business the same as the other States do. Similar to this situation that I have recited as to the iron ore movement is the large terminals located on Puget Sound and on the eastern end of our system. Now anyone familiar with rates knows that in no case is the rate dependent upon distance entirely, and by that I mean that the rate for a ten mile haul is not double the rate for a five mile haul, or the rate for a two hundred mile haul is not double the rate for a hundred mile haul; in fact if you had a one mile haul you would still have a fairly stiff rate as measured by the increase that would occur between 100 and 101 miles, for example, due to the terminal, the expense of the terminal service, that allowance is made in the rates just as truly as though it was set forth in a separate figure and the allowance is made for the heavy expense of operating those terminals and for the heavy investment in those terminals. As to whether every rate is in effect a laminated rate so far as the terminal service is concerned, I am saying that by the large the rates have got to be made on the basis of the cost plus a return on the investment if the company is going to stay in existence and that a schedule of rates that have grown up for many years with

120 those factors, of course, has been recognized, as Mr. Beidelman has pointed out, repeatedly by the rate making bodies in making higher rates on sections where the costs are higher and also as far as the terminal situation is

concerned the fact that all rates are made with an allowance for the terminal service even though it is not set out separately. If there was no allowance for the terminal service a rate for 100 miles would be double the cost of a rate for 50 miles, or the rate for a 200 mile movement would be double the cost for a 100 mile movement but that is not the case. The effect of the mileage prorate as far as the terminals is concerned is that it takes revenue away from the terminals where it is needed to pay the high operating cost and support the expensive plant and credits it to miles of outside line outside of the terminals where the expense of handling and costs are much less, and I have cited that in our returns to the State of Wisconsin and to the State of Washington show with a mileage prorate that in many years they are not earning their operating expenses. The same situation occurs in the territory outside of the terminals. There are different miles in that territory that costs different amounts to construct and different amounts to operate. There may be a bridge that would cost $1,000,000 a mile, there may be a tunnel that would cost $2,000,000 a mile, there may be a mile of line in North Dakota or Montana that would cost $40,000 a mile, and to say that the service rendered in transporting a shipment over those different sections of line with these different values is equal I think is a misnomer.

I might add that Section 15a of the Interstate Commerce Act requires that the revenues pay the operating expenses and a fair return, and even if this were not a part of the law, if the company is to stay in business, such, of course, must be the case.

121 Referring to Mr. Bowen's statement in connection with Exhibit 7 that the average reproduction cost less depreciation per mile of road was approximately twice as great outside of North Dakota as inside of North Dakota, I have made a computation to determine what that percentage would be if instead of using miles of road you should use miles of all track. The figure would be 1.74% instead of 1.96%. In other words, the average mile of all track outside of North Dakota would cost 1¾ times as much as the average cost per mile of all track within North Dakota. In making this computation, I gave the same weight to every mile of side-track or house track or yard track that I gave to a mile of main line track on the road. Even with all those miles assumed to be equal, I still find that the average miles of all track outside the state contains 1¾ times as much physical property as the average mile in the state.

In connection with Exhibit 12, I stated that the allowance for use of property was not based on an average earnings of 6%, 7%, 9% or any arbitrary percentage but based on the actual earnings of the property for that particular year, applying the same percentage to the property within North Dakota and without North Dakota. Now the average earnings of the Great Northern Railway Company, the net railway operating income compared with the cost of reproduction new, less depreciation, varied during these five years from a maximum of 5.85 to a minimum of .23 of one per cent, the average for the five-years being approximately 3.6%, so that by the large and for the five-years the effect of the allowance for use of property that has been used in determining the cost in North Dakota and outside has been a rate of 3.6% on the property. Now this 3.6% is determined after deducting taxes, and as I explained before, I have not included taxes in my cost computations so that the figure that I have actually used instead of being 3.6%, which is the rate of return if you include taxes, the average figure which I
122 have used is 5.15%, the 5.15% being before taxes and after you would take out taxes what would be left would be 3.6%, but as I am determining the net before taxes I have used the rate of return before taxes, which is 5.15% on the average for the five-years, and treated North Dakota the same as the balance of the system. It would be correct to say that in apportioning my interstate freight revenue, the only allowance that I have made for the value of terminal property and for the value of tunnel property and higher cost property in other states is, on the average, an allowance of 3.6% above taxes.

When the mileage prorate system advocated by the state in this case is applied, it does not leave some net railway operating income in every state in each year when the system has net railway operating income. As I explained before, for the State of Washington and for the State of Wisconsin, South Dakota and other terminal states, frequently the amount of revenue assigned to those states on the mileage prorate is less than sufficient to pay the operating expenses let alone their taxes or any return upon their property, not in every year but in many years. In those same years when the mileage prorate would leave a deficit in the three or four states that I mention, it must necessarily leave a corresponding higher return in the other states like North Dakota, because there is net on the system every year. There has been no year in which there has not been some small net left from the system operation.

As to the extent to which my apportionment meets these defects that I have mentioned, my method first allows to each State its operating expenses and then credits in proportion to the cost of providing the plant within that state. This method is identical with the method that would be adopted if there were separate ownerships; in other words, if we had a line separately operated and owned from the North
123 Dakota border west similar to the Puget Sound extension of the Milwaukee at one time, the division of rates between those sections East and West of the North Dakota-Montana line would not be on a mileage prorate but would have to be on a basis similar to the one I have adopted, which allows for all elements of cost on both sides of the dividing line.

If there were two independent connecting companies and the cost of producing the service on one of them were 75% of the total and the cost of producing the service on the other were 25% of the total, they would not divide the revenue equally just because the mileage happened to be equal. I cited the case of the terminal operations at Lake Superior which at one time was carried on by a company independent from the company operating the main line or the road service, and in that case the terminal company was demanding about 40% of the through rate instead of about 10% which they would get on a mileage prorate.

My method of apportionment differs from a straight physical property allocation based on reproduction cost less depreciation because a straight physical property value would not allow for the volume of the traffic. Value, of course, is dependent upon the net earnings largely and a cheap line with heavy traffic would be entitled to a higher value than a more expensive line with lighter traffic. My computation reflects both the volume of traffic and the value of the plant. For example, on page 2 of Exhibit 12, line 9, is a cost of handling interstate traffic and includes an allowance for the operating expenses and a return on the investment both within and without and gives effect to the volume as well as to the physical value of the plant. That is because I multiply the volume as measured by ton miles by the average cost on interstate traffic. The intrastate traffic is allowed 100% to the state in which it occurs.
124 Under my method, credit is allowed to a state for a more costly plant or for a greater cost of providing the plant by increasing the element of cost which reflects the value of the plant. Turning now again to Exhibit 12 on page 2, line 4, is the allowance for use of property based on the I.

C. C. cost of reproduction new, less depreciation, plus additions and betterments since valuation date, the higher the cost of the plant the larger would be the assignment of cost to that particular state and, therefore, the larger the proportion of interstate traffic revenue. The result would be that the more valuable the plant the higher would be the cost and, therefore, the higher the assignment of revenue.

As far as the wholly intrastate freight traffic is concerned, my method gives to a state its actual net from the operations of that traffic based on its gross and its operating expenses without paying any attention to the cost of the plant, so that if a given state had a very heavy volume of intrastate traffic but a very cheap and inexpensive plant, it would still get full credit for the net that would result from the cheaper plant and being less costly to operate and a smaller investment. In making the assignment as I have done, I assigned to the intrastate revenue the same cost of plant per ton mile as is assigned to interstate traffic, but it is applied only to the actual movement intrastate.

In the operating expenses for North Dakota which I have shown on Exhibit 12, the operating expenses in North Dakota are in general the operating expenses incurred entirely within the State, that is, the maintenance of way expenses is the actual expense of maintaining the particular tracks that lie within North Dakota and have nothing to do with the cost of maintaining the tracks in any other state. The main-
125 tenance of equipment expenses, so far as maintenance of the locomotives is concerned, the amount assigned in North Dakota is the amount of maintenance put on the particular locomotives that are operating within the State. So far as the maintenance of cars is concerned it is impracticable to keep a record of the cost by individual cars and the movement thereof as we own some 50,000 cars that are moving all over the country and a great many foreign cars on the line at the same time, so that the apportionment to North Dakota and to every other state is made on the basis of the car miles within North Dakota compared with the total system car miles as applied to the total cost of car repairs. As far as the transportation expenses are concerned, the wages of the men operating the trains in North Dakota is charged to North Dakota and there is no part of the wages of men operating trains in Washington or in Montana or Minnesota included within the North Dakota figures. The station expenses of operating the stations are the cost of operating the stations within North Dakota, and none of the station expenses connected with operations outside of North Dakota.

Now when I said that those expenses were not wholly those incurred within North Dakota I had reference to two principal items, the traffic expenses and the general expenses. Now the general expenses are the general offices, all the clerks in the main general office. The traffic expenses include the traffic solicitation. These traffic solicitors are moving all over the line and we do not assign the cost of these men according to the accident of location, but as far as the general expenses and the traffic expenses are concerned they are assigned to the states on the basis of the relative train miles in North Dakota to the train miles on other portions of the system. With the exception of those two items, which are small items compared with the total, the assignment of expenses to North Dakota is what might be stated on an actual basis of
126 the expenses incurred within the state. Taking, for example, the report to the State Commission for the year 1929 the total operating expenses assigned to the state was $14,079,000. Of that amount the traffic expenses were $625,000 and the general expenses were $539,000, a total of $1,164,000 out of $14,000,000 or approximately eight per cent.

In addition to the North Dakota operating expense that I have shown on Exhibit 12, the performance of the transportation service in North Dakota involved some other operating expenses outside the state which I have not included in my exhibit and to which I have paid no attention. There is the element of the movement of company freight. That takes on some pretty large figures, amounting to roughly ten to twelve percent of the total. The movement of coal from the head of the lakes into North Dakota for the operation of the engines in North Dakota, the movement of lumber from the Pacific Coast into North Dakota for the purpose of repairing cars in North Dakota and engines, the movement of steel. Now this element of the handling of company freight on the basis of the accounting divisions as made rests within the State where the service is performed; in other words, the cost of wages and fuel incurred in the State of Minnesota for handling of traffic, both revenue traffic and the coal for the use of North Dakota is charged to the State of Minnesota and there is no attempt to prorate that figure back to the state for whose benefit the cost is incurred. The wages are the wages and the fuel and so forth that actually physically existed within that state. Now North Dakota is a central state in the center of our system so that material is conveyed into it from both ends of the line, and while it has some offsetting haulage of company freight for the benefit of other

states, such as lumber passing through the state for the benefit of Minnesota, the amount is much larger in the handling of other states for the benefit of North Dakota than vice versa. I worked the figures out for one year and
127 roughly the figures were 100,000,000. net ton miles of company freight handled in other states for the benefit of North Dakota, 98,775,511, for example, against 33,410,433 net ton miles handled in North Dakota for the benefit of other states. No coal moves through North Dakota for use in Montana or Wisconsin. The coal movement is from the head of the lakes into North Dakota. The Montana fuel is derived from a source in the State of Montana, either oil from the Montana oil fields or coal from the Central Montana fields. Our system breaks at Williston into what we call our lines East and lines West. It is a physical division of the line under different general managers and in general the operations East and West of that line are decidedly different. The operations East of Williston use the Eastern coal and lines West use the Montana oil and Montana coal.

If these additional operating expenses incurred in Minnesota and other states for the benefit of North Dakota operations were shown in my computation and charged to North Dakota with the off-sets that I mentioned, it would result in a smaller percentage being assigned to North Dakota, probably a very small decrease. I cannot say exactly how much because there is no way of determining the exact cost of handling this company freight. This decrease would result because I would have a somewhat larger operating expense to deduct from the gross in determining the net for the state.

The interstate passenger revenue I have left the same as it was assigned in the report originally, that is assigned to North Dakota on a mileage prorate. As far as the passenger revenue is concerned it is a relatively small item of your total revenues. Again the passenger rates are constructed on a mileage basis. You can move for two cents a mile anywhere on the Great Northern system, North Dakota, Wash-
128 ington, or anywhere else so that their rates are not constructed on this laminated basis as is the case with the freight rates. The allocation of passenger revenue on a basis similar to the one I have used for the freight to North Dakota would decrease the percentage of the system net earned in North Dakota, but I have not done that for the effect of simplicity and I believe that the passenger revenue being so small would have very little effect on the total. I have given North Dakota some increased allowance both by omitting the operating expenses incurred in

other states and by leaving the mileage prorate for passenger service. I will say right here that these figures that I have computed with an average of 12.22 for five years and 11.71 for three years do not represent the exact proportion to the last one-hundredths of a percent but that they do indicate approximately in a scientific method the percentage that should be assigned to North Dakota, which might be a half of a percent more or a half of a percent less than the figures that I have shown.

As to the extent to which my method gives a higher value to a state because it is a state of low operating cost and cheap operation, of course, you would have a low assignment of interstate revenue to that state in the first place, but when you come to deduct your operating expenses you would deduct a low operating expense and, therefore, to that extent you would increase the net and the full benefit of the intrastate traffic is given to the low cost within that state.

I should say that my method of computing the value of the railroad property in North Dakota was exactly similar to the method that you would use in determining the net earnings of any business. I have allowed the full intrastate earnings and the total cost measured by the operating expenses and interest on the plant as they existed. Then it is necessary to determine how much of the charge for interstate
freight movements was earned in North Dakota and
129 and how much in other states. I prorated the interstate freight revenue on the basis of the cost and then adding that up with all the other revenues and deducting the expenses I found the net.

The only difference between the determination of the value of the railroad property in a state and the determination of the value of a manufacturing plant located in the state would be that in the case of the railroad property you have certain revenues that are earned partly in other states and it is necessary to prorate that kind of earnings. As I explained yesterday, my method would result in assigning 11 or 12% less of the total revenue to North Dakota than the mileage prorate, and I do that by assigning it in proportion to the number of dollars worth of service performed in each state instead of the number of miles of track.

I have prepared the statement marked Plaintiff's Exhibit 13 to show how the Great Northern mileage in North Dakota compares to that on the other parts of the system in tons of freight originated per mile of road. The figures are taken from official reports and are correct. The last three items

on this sheet show that the tons of revenue freight originated per mile of road operated in North Dakota was from one-third to two-thirds of the average for the balance of the system, being 1,204 in 1930 compared to 3,689, 835 in 1931 compared with 2,117, and 645 in 1932 compared with 990 for the balance of the system.

I have also prepared a similar comparison showing the amount of traffic carried per mile which is marked Plaintiff's Exhibit 14. These figures are also taken from official records and are correct. This comparison shows the net ton miles per mile of road, which is commonly referred to as the traffic density, the averages being the last three figures on the sheet. The figures show that North Dakota during
130 the three years had from eighty to ninety per cent as many net ton miles per mile of road as the balance of the system.

(The documents referred to were offered and received in evidence and are included herewith as Plaintiff's Exhibit 13 and Plaintiff's Exhibit 14)

The average net railway operating income, without considering taxes, for the five years, 1928 to 1932, as shown on page 1 of Exhibit 12, for the State of North Dakota was $3,464,-338. During those same five years the average taxes, railway tax accrual, were $1,727,771.00, leaving $1,742,567 as the net railway operating income after allowing for taxes applicable in North Dakota. Now capitalizing this at seven per cent would give a value to the property in North Dakota for the average of the five years of $24,893,814, or if capitalized at six per cent a value of $29,042,783, as compared with an assessed valuation of $78,000,000. That valuation includes the high earning years of 1928 and 1929. In 1932 the net before taxes, as shown on Exhibit 12, for the State of North Dakota was a little over half as much as the taxes, so that for that year North Dakota failed to earn the amount of the railway tax accruals by some six or seven hundred thousand dollars.

To the extent that the taxes actually paid in North Dakota may have been excessive during those five years due to the use of the mileage prorate or any other cause, that would tend to reduce the value. If the taxes had been lower than they were the value would have been increased.

I cannot see any difference in principal between the method of allocating the value of an interstate railroad which is advocated by the state in this case and the application of the same method to an interstate electric power

company. I would say that the method was exactly
131 analogous to the situation that would exist if we had a power production system at say Fort Peck, Montana, transmitting power across the State of North Dakota and serving North Dakota, into Minnesota and distributing the most of its power in the Twin Cities. In a case of that kind you would have an investment for the power plant and transmission lines in Montana of probably $50,000,000. The cost of the line across North Dakota and whatever substations you would need would possibly be $2,000,000, and the cost in the State of Minnesota, including its expensive transmission to residences and industries in the Twin Cities would possbly be $50,000,000, I am just giving assumed figures and round figures, but the mileage through North Dakota would be double the mileage in either Montana or Minnesota, therefore, on a mileage prorate basis one half of the total revenue collected by that industry would be assigned in North Dakota and one quarter to each of the states of Montana and Minnesota, thereby giving a return of 70% say on your investment in North Dakota and not assigning enough to either of the other two states to pay the operatig expenses, when in fact the rates were made on a basis of allowing a 5% return on the property value. Now it don't make any difference whether you divide that revenue up, it don't make any practical difference whether you divide it up or not on the transmission mile or wire mile, which is analogous to a road mile or a track mile, there would be same additional wire miles in the Twin Cities which would slightly decrease the assignment to North Dakota, possibly makng it 48% instead of 50% of the total, or it does not make any difference if you divide it up on the ampere miles or ohm miles or volt miles or any other basis exactly analogous to your car miles or your ton miles or your locomotive miles, you would get the same thing, you would have an assignment of double the revenue to North Dakota that you would get in assigning to either one of the other states. Now the same
situation exists in dividing interstate freight revenue
132 on a mileage basis only to a much less exaggerated extent than would be the case with an electric transmission system, but nevertheless the fallacy is there just the same to a smaller degree. As I have said, this assignment of mine takes from North Dakota about 11% of the revenue that is assigned to it on a mileage prorate and the other bases that have been used. If my assumed system value of $102,000,000 for this transmission plant were allocated to the State of North Dakota on a composite ratio of miles of line and miles of wire and ampere miles and volt miles and ohm

miles, the $2,000,000 worth of property that I assumed was located in North Dakota would be given half of the total investment of $102,000,000, giving an assessed value of $51,000,000 in North Dakota for a $2,000,000 plant. The assessed value in each of the other states would be $25,500,000 on a $50,000,000 investment. I would contend that in a case of that sort the allocation ought to be made in proportion to dollars worth of service produced in each state instead of miles, for the same reasons that I have already stated for railroad property. If the over-all rates would give a five per cent return on the system, then the property in North Dakota would be earning 5% and not 75% as would be produced by this arbitrary basis assigning a loss to the other two states, not assigning enough revenue to pay their operating expenses. There is no difference in principle between assuming that every mile of an electric production transmission plant is the same and assuming that every mile of a railroad line is the same because it is of the same length.

Referring to Mr. Beidelman's testimony that in fixing freight charges generally both the Commission and the company have recognized higher costs of service and have increased rates to reflect higher costs in certain sec-
133 tions, I have prepared a statement showing the cost per revenue ton mile intrastate in each state in which the system operates for the years 1932 and 1933. This statement is marked "Plaintiff's Exhibit 15". The figures are taken from official records and are correct.

(The document referred to was offered and received in evidence and is included herewith as Plaintiff's Exhibit 15).

Exhibit 15 shows that the revenue per net ton mile on intrastate traffic in the States of expensive terminals like Washington, Wisconsin and Minnesota are higher than the revenue per net ton mile in the State of North Dakota and that the revenue per net ton mile on intrastate freight in the State of North Dakota is less than the revenue per net ton mile on intrastate freight on the system. Now I am not claiming that the difference in the revenue per net ton mile on intrastate freight is an exact measure of the difference in cost of these various states because the revenue per net ton mile is dependent upon the nature of the commodities moved and the length of the haul, but I do declare that this exhibit gives an indication of the situation and that I am not intending to draw the idea from it that the State of Wisconsin with a revenue per net ton mile in 1932 of nearly ten times as much as that in North Dakota on intrastate freight

is because the costs in Wisconsin were thirteen times as much as those in North Dakota.

It is generally true that the charge for a very short movement is relatively higher than the charge for a longer movement and of course all these intrastate revenues which average around 2c are much higher than our average revenue on interstate freight, which averages less than 1c.

134 On the Great Northern, the longest possible haul in Wisconsin intrastate would be 15 or 16 miles so that it would consist almost exclusively of terminal service. That would account to a certain extent for the high revenue per mile there.

I have prepared Plaintiff's Exhibit 16 showing the net operating income of the Great Northern Railway Company for the years 1928 to 1933, inclusive. The net railway operating income figures are taken from official records and are correct and the other figures are computations from the net railway operating income. The net railway operating income is the net money earned by the operating property and is determined by taking the operating revenues, subtracting the operating expenses and the taxes, also the uncollectible railway revenue and the equipment rents and joint facility rents, and it is a factor that has been created and named such by the Interstate Commerce Commission and was used as a measure of the earnings of the carrier under Section 15A of the Interstate Commerce Act to determine the amount that was recapturable, if any.

The first line of figures is the average net railway operating income for five years from 1922 to 1932, 1932 was the last year that the figures were available when the 1933 North Dakota assessment was made, so that the first line from 1928 to 1932 is a five year average of the net railway operating income capitalized for the system at six per cent, giving something over three hundred and thirty-two million dollars; at seven per cent something over two hundred and eighty-four million and at eight per cent something over two hundred and forty-nine million dollars. The second line of figures at the bottom of the sheet shows similar information using only the three years 1930, 1931 and 1932, which shows at a six per cent rate a value of less than two hundred million, at a seven per cent rate of one hundred and sev-

135 enty odd million and at an eight per cent rate something less than one hundred and fifty million. The one year figure, 1932, which was the last year available when the 1933 North Dakota assessment was made, if capitalized

at six per cent would produce a system value of twenty-one and a half million dollars on a six per cent basis; about eighteen and a half million dollars on a seven per cent basis and slightly over sixteen and a half million dollars on an eight per cent basis.

I have prepared a statement showing the yield to owners of Great Northern bonds based on the average prices of 1932 and 1933. This is marked "Plaintiff's Exhibit 17" and the figures are correct. I computed these figures by taking each issue of outstanding bonds during the year 1932, for example, figuring the yield to maturity on those bonds on each issue based on the average price for the year 1932, and then we take the total return or yield to maturity for each issue by the volume of that issue. In other words, our first and refunding bonds that were selling in the neighborhood of par would be a yield to maturity of 4¼%; our seven per cent bonds which were selling at fifty or sixty dollars would yield to maturity much more than seven per cent, in the first place first because you would receive $7.00 return on a sixty dollar investment say, and secondly that when maturity occurred in three or four years instead of receiving the $60.00 that you paid in you would receive $100.00 back. There are bond tables prepared which gives effect to both the rate of interest and the year of the maturity of the bond and also allows for the fact that receiving the additional bonus, if you may call it that, between the market price and the par value some years in the future, is not equivalent to receiving the same money or a proportionate share of it at the present time but is discounted in these tables for the present worth of the extra dollars which will be received at some years hence. The par value of all of our bonds out-
136 standing is slightly over three hundred and fifty million dollars and the average market price of each class of bond for the year, considering the high and low for each month, the rate of return of the security and the year of its maturity gives a yield to maturity on our outstanding bonds of 10.72% in 1932 and 11.23% in 1933. All bonds are purchased on the basis of the yield to maturity and not on the basis of the current yield. The 10.72% is based on 1932 average market prices and the 11.23% is based on 1933 average market prices.

(The documents marked "Plaintiff's Exhibit 16" and "Plaintiff's Exhibit 17" were offered and received in evidence and are included herewith as Plaintiff's Exhibit 16 and Plaintiff's Exhibit 17).

The yield on bonds in 1933 was very high, higher than it had been in previous years and higher than it has been since that time for both the Great Northern bonds and general bonds in the general bond market. That was true generally of railroad bonds as well as industrial bonds.

I have prepared statement showing the average market values of the stocks and bonds of the Great Northern Railway Company for various recent periods and allocating a portion of that total value to railroad property. This statement is marked "Plaintiff's Exhibit 18". The figures are correct and correctly show what they purport to show. The net railway operating income in column No. 2 are the figures showing the earnings from the railway property and are similar to the figures on Exhibit 16. The net income from other properties and securities, column 3, is the income from all other sources other than the railway operations, minus the deductions for amounts paid for all other causes than railway operations except for interest on bonds, so that
137 the total amount shown in column 4, the sum of items 2 and 3, is the amount available for paying bond interest and return to the stockholders. Column 5 is a ratio of the net railway operating income and the money derived from the operating property to the total net income of the system, that is the relationship of column 2 to column 4 and varies from 73% in 1929 to 22% in 1932, with an average for the five years of 64.51%. That is a weighted average. The arithmetical average would be somewhat different and give a somewhat lower percentage assigned to the net operating income. It would be nearly 56% instead of 64.5%. The lower part of Exhibit 18 shows the average market value of the stocks and bonds separately and the total value of these stocks and bonds. These figures are determined by taking the average high and low for each month in the year, that is twenty-four figures, and averaging them to obtain the average market price for that particular security, taking each class of bonds separately for that year and multiplying that average price by the number of outstanding units of the security gives the average market value of that particular issue and summing those items together we produce the total figures shown in columns 2 and 3.

Now column 5 is the separate value of the railroad property based on the average market price or value of the stocks and bonds, which is determined by applying to column 4 the ratios of the net railway operating income, the total income shown in column 5 in the upper part of the sheet. In other words for the year 1932 in the lower half of the sheet, the total average market value of stocks and bonds is shown as two

hundred and ninety-six million dollars in column 4 and by taking 22.06% of that volume which is shown in column 5 opposite the year 1932 in the upper part of the sheet, we obtain the separate value of the railroad properties as distinguished from the value of outside property of $65,364,040 shown in column 5, because the stocks and bonds cover not only the railway property but all the outstanding other proper-
138 ties that belong to the Great Northern system.

The figure of $238,000,000 at the top of column 5 is the average for the three years 1930 to 1932. The ratio that I applied to this was a three-year average ratio and not a five-year average. I used the weighted average of the three-year average ratio, which is approximately 53½%. The same way with the two year figures for 1931 and 1932, the weighted average for the two years basic data shown in the columns 2, 3 and 4 in the upper part of the sheet is used to obtain a percentage to apply to column 4 on the lower part of the sheet to produce the figures in column 5.

Column 6 is a separate determination of the average market value of stocks and bonds for the system belonging to the railroad property and is determined by substracting from column 4 on the lower part of the sheet the total market value, the figure in the exhibit produced by Mr. Schoettler of one hundred and eighty-two odd million dollars reflecting the value of the outside property other than the railway property. That, of course, produces somewhat different figures from those in column 5 based on the per cent of income.

I have prepared Plaintiff's Exhibit 19 which shows the allocation to North Dakota of these system values that I have computed. This statement is correctly computed and correctly shows what it purports to show.

Lines 1 to 4 of Exhibit 19 show what we believe to be a correct computation of our value in North Dakota. The first line is the average earnings for the years 1930 to 1932 capitalized at 7%. The years 1930 to 1932 were used instead of a longer period because the prior years belong to an era that is past and throws little or no light on the present or future earning power of our system. The 7% rate is the smallest rate that we believe can be justified in capitalizing these earnings as I have shown by Exhibit 17 that investors were requiring 11% return on our bonds, which are a prior lien on the property in purchasing this
139 prior lien during the years 1932 and 1933. The capitalization of those average earnings at 7%, which are shown on Exhibit 16, is $170,821,329. The second line shows

the average stock and bond value, 1930 to 1932, using the railway income proportion as developed on Exhibit 18, column 5, in the lower portion of the sheet, and is $238,014,150. It would probably be more logical to use the current year figures as the investors' judgment on the current value of the property, including the future prospects, but I have used the three year average in both of these items, and item 3 is the average of these two figures, items 1 and 2, giving a system value for the operating property of $204,417,740. Now if 11.71% of that be allocated to North Dakota, which is the three year average shown in the last column of Exhibit 12, page 1, the computation of the net railway operating income applicable to North Dakota, I say if we use 11.71% as representing North Dakota's proportion of the system value we would get a figure representing North Dakota's proportion shown in the last column of item 4, as $23,937,317. If you used the five year factor from Exhibit 12, giving North Dakota 12.22% of the system value, the amount applicable to North Dakota would have been $24,979,848. The next group of figures, marked small a to e are the five averages which the defendant in its answer in this case states should be used, namely, mileage of all tracks, the car and locomotive mileage, the revenue traffic units, the gross operating revenues, using a mileage prorate of through revenue all through the five year average except the mileage of all tracks and the physical property as measured by the cost of reproduction new, less depreciation, and taking these five averages and obtaining an arithmetical average of these averages a percentage of 18.25 is obtained instead of the 11.71 determined by considering the net earnings in North Dakota as developed on Exhibit 12.

If the State's figures of 18.25 be applied to the system
140 value, which I have shown on line 3 of $204,000,000, the allocation to North Dakota would be $37,306,238 as shown in the last column on line 6. Now I have put on this exhibit for the benefit of the Court figures representing the highest value shown on Exhibit 16 on line 7, which is the capitalization at 6% of the average net railway operating income and using five years instead of three years as I have done up above. I have also shown on line 8 the highest value shown on Exhibit 18 for the stock and bond value of the operating property, which is $260,910,990 and taken an average of these two highest figures in line 9 to produce the system value of $296,495,612. This $260,000,000 in line 8 I might say gives the railway property more than an income proportion of the total stock and bond value and is, as I have said, the highest figure shown on Exhibit 18 as the system value. Now taking the average of these two highest values and applying the 11.71% shown on Exhibit 12 as the amount allocated to North

Dakota would give a value in North Dakota of $34,719,636, whereas if you had used 18.25%, which is the percentage claimed by the defendants in this case, the value would be $54,110,449. This percentage I think is much higher on system value than is justified with a much higher percentage applied in North Dakota. These figures then could be compared with the assessed valuation, item 12 of Exhibit 19 in North Dakota in 1933 of $78,832,888. In other words, using the highest value that I have determined with a 6% capitalization of net railway operating income and the highest value on the stock and bond figures for three years and applying the State's percentage of allocation to North Dakota, which we believe to be too high, produces a value of the property in North Dakota of $54,110,449, which is 69% of the assessed valuation for the year 1932, or 31% in excess; in other words, the assessed valuation is 45% in excess of the North Dakota proportion as determined on line 11, using the highest
141 possible system value and the highest possible percentage applicable to North Dakota.

(The document referred to was offered and received in evidence and is included herewith as Plaintiff's Exhibit 19).

In the reports of the Company to the North Dakota State Tax Commission, the average market value of stocks and bonds are shown each year and also the net railway operating income for each year and the income from outside stocks, so as to include all of the basic figures that I have been using in these exhibits.

As to reasons why the use of a five year period of average earnings instead of a shorter period would be particularly objectionable in 1933, reference to Exhibit 18 will show the net railway operating income for the five years 1928 to 1932, beginning with $31,000,000 in 1928, $32,000,000 in 1929, $22,000,000 in 1930, $13,000,000 in 1931 and $1,000,000 in 1932, the most recent year. Now using a five year average you would get exactly the same result if the net railway operating income instead of having been $31,000,000 in 1928 and $1,000,000 in 1932, the most recent year, I say you would get the same result on an average if the net operating income had been $1,000,000 in 1928 and $31,000,000 in 1932; yet I do not think anyone would contend that a property with an increasing net income to $31,000,000 from $1,000,000 net operating income over a five year period was not worth a great deal more than a property whose net operating income has gone from $31,000,000 five years ago to $1,000,000 at present, and yet the five

year average would give identically the same figure. I say the value of the property is more dependent on its current earnings, its earnings just prior to the current year, than it was five years ago although on a five year average you would get exactly the same value of the property.

142 Roads with ascending earnings are more valuable than roads with descending earnings, although the average for five years may be the same. I do not know of any way to overcome that situation except to weight the later years more heavily or else use a shorter period of three years as I have done.

As to the large difference between my allocation factor of 11.71% on Exhibit 12 and the state's allocation factor of 18.25% if you will turn to Exhibit 19, the items a, b, c, d and e shown thereon are the State's allocation factors; those are the five factors that the State uses in determining its ratio of 18.25%. Now the first four factors are very close to one another, showing but slight variation, and they all are the reflection of a mileage situation, so that you have that situation multiplied by four in determining your average of the five items, whereas the physical property, the last item, with an average of 13.85% has a weight of only one in the method that they have used. They assume, for example, on the mileage of all tracks that each mile of track in North Dakota is the same as every mile of track outside of North Dakota as though they were all equal; they assume that the movement of a car one mile in North Dakota that costs maybe ten or fifteen cents and requires a use of $50,000 worth of property is the same or equivalent to the cost of moving a car one mile in a terminal where the cost may be $3.00 for the car movement, and the value of the property may be a million dollars a mile. The same thing is true as to the locomotive miles, ton miles, the revenue traffic units and the gross operating revenues which are divided again on the miles of road. I might illustrate that again, if the Court please, by referring to this Mesabi Division where our ore movement occurs. If we were determining these four factors for the Mesabi Division, comparing Minnesota with the total of the Minnesota and Wisconsin figures to obtain the percentage,

143 the miles of all tracks in Minnesota would be slightly less than the miles of all road because there are many miles of track at the docks in Wisconsin that would be given weight in that factor, so that for the mileage of all tracks you might have a figure of 85% assigned to Minnesota, but for the car and locomotive miles there would be 90% of the miles made in Minnesota, so that that factor too would

have a weight of 90%. The third factor, the revenue traffic units, 90% of the ton miles would be made in Minnesota, The gross operating revenues divided on a mileage prorate 90% would be assigned to Minnesota, so of those four factors you would have 90% assigned to Minnesota in all cases and ten per cent to Wisconsin, except for the small effect of the bigger proportion of all track mileage in Wisconsin which would lower that first factor a little. Now that same effect has bearing through the system and you notice how close together the figures are for the State of North Dakota, so that the effect of the mileage is being given a weight of four and the other element, the physical property, is given the weight of one. Indeed, there is still a worse situation than that arises, because take the car and locomotive miles, for example, the car miles as computed in our reports end with the arrival of the car at the terminal. There are no car miles figured after the train is broken up although the car may be moved many miles within the terminal. The locomotive miles end with the arrival of the locomotive at the terminal. Although there are many switching locomotive miles made there is no consideration given in these factors; and the revenue traffic units and ton miles are not figured to the exact ultimate destination, but to the point where the train movement ceases. Similarly the gross operating revenues that is divided on a mileage basis is divided on a road mileage and not on a track mileage basis, so that in determining this average percentage for North Dakota all the car
144 miles, ton miles and locomotive miles made in the terminals in Washington or Minnesota are left out of the computation, thereby swelling the percentage applicable to North Dakota. When the percentage is applied to the system value the State then argues that it is proper to take the value of these terminals in apportioning the amount to the State but in determining the factors they leave out these traffic units in determining the percentages. Now I am not saying and I do not want to be understood that they are doing anything improper, I do say it is improper but not wilfully wrong because that is the way the figures are put up, but it is a fact nevertheless that it is impracticable, of course, to have a speedometer on every car and measure its movements around the terminals and through the terminals, so that the elements of car miles and ton miles do not include any allowance for the movement of the car within the terminals, so, therefore, the percentage that is assigned to North Dakota is larger than it would be if actual mileage of the movement of the car were considered.

Of course, the factors of car and locomotive miles and ton miles give some reflection of the traffic density on different sections of the line, but when they consider a locomotive mile on a branch line in North Dakota, and we have lots of them, as being equivalent to a locomotive mile handling an ore train of one hundred and seventy cars in Minnesota, which this road very frequently does, I then say you are producing results that are inequitable. The year round a locomotive on a North Dakota branch line might handle around 200 to 400 tons per train as a generous figure. It would take about 70 locomotive miles of that character to produce the same amount of transportation that is produced by one locomotive mile on an ore train.

145 The average car loading in the State of North Dakota is around sixteen tons, whereas the average car load on the system outside of North Dakota would be nearly thirty tons, and yet a car mile in North Dakota is considered equivalent to a car mile on the rest of the system in working out these percentage averages.

Referring to Mr. Bowen's testimony that the Great Northern by making investments in tunnels and line changes outside North Dakota has shortened the track mileage outside the state and thereby increased North Dakota track mileage proportion of the system, a similar result is followed from the company's investment in locomotives for use in other states. The development of transportation on the Great Northern has been a progressive purchase of heavier locomotives for use in territory outside of North Dakota with a corresponding reduction of the locomotive miles made in that territory. In other words, by putting heavier locomotives on certain sections we were able to eliminate helper locomotives and thereby reduce the locomotive miles in those sections. That is a situation that has been occurring progressively for the last twelve to fifteen years so that at the present time by the use of these larger locomotives, with heavy investment therein, costing $110,000 apiece, we are able to reduce the locomotive miles in the territory outside of North Dakota and thereby by the State's formula assign a bigger percentage of the locomotive miles to the State of North Dakota.

That process was followed more outside North Dakota than in North Dakota because the territory outside was susceptible to such an arrangement. The heavier grades occurred outside of the state. The desirable thing in train operations would be to start a train out of the Pacific Coast terminals and move it into the Twin City terminals without

breaking up the train, use a block of four thousand or five thousand tons and so move it. We have been working to that situation on the Great Northern and there
146 was a time when it was necessary to break that train into two units where the grades were heavy and take the train across with two train miles instead of one, due to the grades in both the Cascade and the Rocky Mountains. Now with the use of this heavier power we are able to move a block of tonnage from forty-five to forty-eight hundred tons from the Pacific Coast clear through without double heading or breaking the tonnage and with only the use of helpers where the grades are the steepest for short distances. It follows that North Dakota now has a larger percentage of the total locomotive miles without having made any increased investment or change in the method of operation in North Dakota.

As to how the operating cost per ton mile or per car mile in the principal Great Northern terminals compared with the average cost of road haul per mile, speaking in general and by the large it costs about half as much to handle a car in the terminals, that is the two terminals, as it does to move it on the road. The average road haul on all freight in the Great Northern is around three hundred miles and the terminal handling may be average, say ten miles, or the terminal handling mileage is one-thirtieth of the road haul mileage and with a cost in the terminals of one-half as much as the cost for the road movement, the average cost per ton mile or car mile in the terminals would be fifteen times as much as for a movement one mile on the line. Those are just rough approximate figures, but are based on studies that have been made many times by various people as to the relative cost of terminal and line haul movement.

I do not know of any unit of allocation that can possibly reflect the various differences between road haul movements and terminal movements and between movements in mountain districts and movements on the plains and so on, other than the unit which we have called a dollars worth of
147 service. I do not know of any other unit that is not subject to all the objections I have been citing.

Referring again to Mr. Bowen's testimony to the effect that track mileage in other states has been shortened by additional investment in those states, the immediate effect of that if the state's allocation method by five factors is followed, would be that the additional investment made for the purpose of shortening the mileage would decrease the value in that particular state and increase the value in every other state, and that is because the mileage of all tracks,

item a, would be decreased in the state where the improvement was made, the car and locomotive miles would be decreased because the through trains would be passing over a shorter track, the revenue traffic units would be decreased similarly, the gross operating revenues assigned on a mileage basis would be similarly decreased, although the fifth item the physical property value would be somewhat increased, so four factors would be decreased, for the state where the improvement is made. Conversely, in all the other states four factors would be increased and one factor decreased; so that the effect would be to transfer value from the state where the improvement is made to the other states. By creating this tunnel investment in Washington of $26,000,000 that Mr. Bowen testified to, on the defendant's method of allocating value to states the investment or the value of the property in North Dakota has been increased.

Under accounting rules as established by the Interstate Commerce Commission, when expensive tunnels or regrade projects are installed for the purpose of reducing operating expenses in that section, the income statement as reflected in the net railway operating income is increased due to the cheaper operation as a result of the additional investment. There is nothing allowed in this net railway operating income for the interest on the bonds or the investment,
148 it is purely an operating revenue minus operating expenses, taxes and a couple of other smaller items, so that making an investment for the purpose of cutting down operating expenses increases the net although there may be an offsetting charge down in the bond interest for the bonds and new money that had to be provided to make possible that improvement.

If you then obtained a system value by capitalizing that increased net you would get a corresponding increased system value. If you were to take the net operating income after the expenditure of $26,000,000 for those tunnels had been made and presuming that net operating income was higher than it would have been if the improvement had not been made which was the basis of making the improvement, then the system value as determined by capitalizing that net railway operating income would be increased because of the application of this new money. At the same time the proportion assigned to the state where the improvement occurred would be reduced by using the method advocated by the defendant in this case, so you would have the double-barreled effect of increasing the percentage of the system net assigned in North Dakota because of this improvement made in the

State of Washington, and when applying that percentage to the increased net for the system a still higher value would be assigned to North Dakota. North Dakota would get a higher percentage of a higher system value because of an improvement made in another state, as would every other state also outside of the state where the improvement occurred.

I have prepared a statement marked "Plaintiff's Exhibit 20" showing the decrease in value of the Great Northern Railway Company from 1932 to 1933. The figures are correct and correctly show what they purport to show.

149 This exhibit is simply a putting up in concrete form the decrease that has occurred between 1931 and 1932, first on the basis of the net railway operating income, secondly on the basis of the average market price of stocks and bonds of the Great Northern Railway Company, and third, of the assessed valuation. Now in order to not be extreme and use the comparison of the single year 1931 and 1932 I have taken on line 1 the five years ending with 1931 and on line 2 the five years ending with 1932, and have shown the average net railway operating income and the percentage decrease of 21.89%. If a three year average ending with 1931 and 1932 were similarly treated the decrease as shown in the last column would be forty-six and approximately one-half per cent. If comparison of 1932 were made with the year 1931 the decrease would be 89.81%; the average of these percentages being 52.73%; that is a flat average or arithmetical average. Similarly I have taken the average market price of the stocks and bonds attributable to the railroad property by the method shown on Exhibit 18 and have shown a percentage decrease with three year figures ending with 1931 and 1932 of 32%, for the two year figures of nearly 40% and for the one year figure of 72.94%; that is comparing the decrease in the average market price of stocks and bonds from the year 1931 to 1932; the average of these percentages being 48.31%, which is closest to the 52.73% developed on the basis of the net railway operating income in the upper half of the sheet. Averaging these two average per cents, or what is the same thing, averaging the six percentages of decrease, three on the basis of the net railway operating income and three on the average market price of the stocks and bonds, produces line 21, which shows the average decrease of 50.52% and line 24 shows that the assessed valuation of the railway property in the State of North Dakota was reduced between 1932 and 1933 assessed values two-hundredths of one per cent.

150 (The document referred to was offered and received in evidence and is included herewith as Plaintiff's Exhibit 20).

Referring to the situation on the Great Northern Railway Company in 1933 as disclosed in the Accounting Department with respect to operating expenses, our hourly wages that we are paying to our employes is now much higher than it has been. In the year 1914, our average wage was twenty-four cents an hour and today and 1933, which is the same thing, the figure is about sixty cents an hour. We have gone through a period in which there was a reduction in wage rates of ten per cent given to all employes. Originally that was agreed upon February 1, 1932, to last one year but that was later extended but with an agreement reached this spring between the men and the managements of all of the roads the ten per cent reduction made two years ago is to be restored gradually; two and one-half per cent of it was restored on the first of July last, another two and one-half per cent will be restored in December and the balance of five per cent will be restored in April of 1935, thus restoring the entire ten per cent cut and putting the wages back to the highest level that they have ever been at in the railroad operations. Due to the industrial code operations, cost of practically all materials is increasing, particularly the dock coal, which is an important element in operating the Great Northern Railway, and the coal that we are buying for next year will be on a decidedly higher basis than the coal which we are using at the present time. All of this coal by the way must be purchased and stored before the close of navigation this season. The restoration of the ten per cent wage reduction will cost the Great Northern about $2,800,000 a year and I estimate
that the increased cost in fuel and other material will
151 be nearly as much, approximately $2,600,000 a year.
There is also the so-called Railroad Retirement Act which has been passed and is now being tried out in the Courts, which if held legal will increase the cost for pensions to the Great Northern of about $600,000 a year. These figures of wages and material increases are based on the volume of business in 1933 and do not make any allowance for a substantial increase in business back to the level of 1931, for example, or 1925 and 1926, which were not peak years but were still much higher than the year 1933 in the volume of traffic.

Based on 1933 conditions, if legislation should be passed at some time in the future limiting the length of trains, limiting the hours of employment to six hours and providing minimum for the number of men employed in crews, similar to requirements in bills which have been actually introduced, they would increase our operating expenses approximately $12,000,000 a year.

In the years 1928 and 1929 our expenditures for maintenance of way and maintenance of equipment approximated $37,000,000 in each of those years. In 1930 they had reduced to $32,000,000; in 1931 to $24,000,000; 1932 to $20,000,000; and 1933 to $16,000,000, compared with $37,000,000 in each of 1928 and 1929. We had a plant that was in excellent shape and we have been living off the fat, if you may call it such, that we had in the property and we have been using up that stored maintenance, so that for the future we certainly cannot hope to continue on the basis of the low level of expenditures for maintenance which we are now experiencing. Some of this drop that I have referred to was due to fewer locomotive and car miles, but in the main part to the decrease on our track and even in failure to keep the equipment to the same degree of maintenance as heretofore, which can be accomplished by setting aside the cars that become in bad order and using other cars as there is an excess car supply, I say that that
152 using up of stored maintenance cannot be continued and there must be an increase in the sums allotted these two departments in future years even if the volume of business is to stay where it is today; which I sincerely hope it will not.

If we had not had any stored up maintenance in 1928 and 1929 to draw on in 1931 and 1932, and if we had had to expend the normal amount that the volume of business in the later years would call for, the net railway operating income of the company would certainly have been wiped out completely in the years 1931 and 1932 and would have been very materially reduced in the former years. It was only a little over a million dollars in 1932 even with the depressed maintenance expenditure.

Referring to Mr. Beidelman's estimate that under normal business conditions in the future, the Great Northern Railway Company will earn a gross annual revenue of $86,000,000 a year, Mr. Beidelman detailed at some length methods which his department go through to prepare revenue forecasts and I might say that the accounting department and myself personally is responsible for the development of the net figure in advance after the revenue forecast has been made. In other words, from the trend of costs, present and expected, I am expected to make an estimate as to how much net will be left from the gross, which Mr. Beidelman's department estimates, based on the present situation without regard to the passage of any other legislation. My estimate would be that out of the $86,000,000 our expenses would be at least 72% thereof, that is the so-called operating ratio; in fact I think it will be

somewhat higher than that, but I will be conservative and estimate that 72% of the revenues will be taken up by
153 the expenses. That is less than the other railroads in the United States are doing today, but the Great Northern is a somewhat lower cost railroad than many other railroads. Allowing for $8,000,000 for taxes, which is very little more than the present figure and may well be much more than that, and $2,100,000 for equipment and joint facility rents, will produce a net railway operating income for this average or normal year with an $86,000,000 gross, a net railway operating income will be produced of $14,000,000. If this $14,000,000 were capitalized at 7% a system value of $200,000,000 would be indicated, and North Dakota's proportion on the basis of 11.71% which I have developed on Exhibit 12, would be a $23,500,000 value and on the basis advocated by the state of 18.25% the North Dakota value would be $36,500,000. If a lower rate of capitalization than 7% were used those figures would, of course, be correspondingly increased.

As to what would be the effect upon the capacity of the Great Northern Railway Company to function as an interstate carrier if compelled to pay the $600,000 of taxes which it alleges in its complaint to be illegal, such a payment would interfere seriously with important financing and would also prevent the making of much needed improvements. There are many things that could be done to reduce our operating cost if the capital were available, but considering the prohibitive price of capital and the impossibility of getting it for a road like the Great Northern, it is out of the question to make those improvements. Any decrease in the small net existing now to the extent of $600,000 would certainly affect adversely the credit of the company and its ability to continue in business for it is reaching the point where it is a question as to where the funds are to be provided in order to stay in business. We have not earned the bond interest for the last two years and will not earn it this year.

154 Cross-Examination.

By Mr. Shaft:

The first objection which I have to the method of allocation of the revenues of the railroad to the State of North Dakota is that sufficient emphasis is not placed upon cost so far as interstate revenues are concerned. The method that I have adopted does not assume that all parts of the system are equally profitable. It is based on the statement of Mr. Beidelman, supported by the fact that the Interstate Commerce Commission and the Railway Company in making the rates

on this interstate traffic has made allowance for the higher cost in one territory than another and, therefore, has built up a laminated rate, North Dakota being in the lower cost territory. I am not stating that all interstate freight rates are based upon this laminated rate structure but that the total value of the interstate rates must in the long run provide for the cost of operation and the return upon the investment necessary to give the transportation service covered by that particular movement. There is no shipment passing through North Dakota that is not affected by this terminal consideration which makes for a lamination. I do not know as to every particular shipment whether the laminated rate structure fixed by the Interstate Commerce Commission applies. Probably 20% of the interstate business in North Dakota consists of shipments from North Dakota to Minnesota. In the case of shipments of grain from North Dakota to the docks at Duluth or Superior, the basis of my computation is on the assumption that the rates provide for a return on the investment plus the cost of giving the service. If that were not so, we could not continue in business. I am not saying that that is true as to every individual shipment
155 between every two points. The rates in the aggregate do not produce any such return as 6% and I have not based my computations on that assumption, but have based them upon allowing the return which the rates actually would permit the company to earn. On a shipment from North Dakota into Minnesota within the same zone you do certainly have in that rate and in every rate, an allowance made for the terminal service separate and distinct from the line haul service just as much as though it were set out as a separate factor in the tariffs, which it is not, but the fact that the rates do not progress on a mileage basis, that is, the movement of two hundred miles does not cost double the movement of one hundred miles for that commodity, and every rate proves that there is an element added in there for this terminal service and to that extent there is a lamination there. Of course, there would not be three zones if you were only moving through two states, but I do say that the Interstate Commerce Commission and each state commission are watching the rates to see that the public pays no more than what is fair and that by the large each rate and every rate will provide for the cost of service and a fair return, which is not only basically sound but is written into the law of the land. There are many rates on transcontinental commodities which do not approximate a fair return on the investment because of competitive conditions and North Dakota is participating in practically all of the transcontinental movements to a

larger extent than they are with these movements that you refer to that originated or terminated within the state. There is a small percentage of North Dakota interstate business which comes from the east and terminates in North Dakota, but it would be much larger than the percentage of
156 goods distributed in North Dakota coming from the west.

Each and every rate is not exactly scientifically fixed upon the basis of the cost of operation plus a reasonable return on the investment, but by the large they do give some return in an amount in excess of the net cost of operating the railway, as is evidenced by the fact that we are earning a net even in the poorest years though it may be little. It is true of movements through every state including North Dakota that we are able to earn this net because the rates for goods moving through the state are sufficiently in excess of the low cost of operation to give a substantial profit on the business. I I do not believe it is true that we make a greater profit in North Dakota per mile than in other states particularly western states. This is shown by the fact that the figures on Exhibit 12 show a smaller percentage of the net assignable to North Dakota than either the miles of road or miles of track basis would produce. In other words, the net revenue per mile of road or per mile of track is less in North Dakota than it is on the balance of the system. I am referring to the net which I have produced by the method which I have followed in Exhibit 12, which reduced the revenue assigned to North Dakota as compared to that reported to the Railroad Commission by about 11%.

Our protest against the method of assigning earnings on a mileage basis was made to the Board of Railroad and Warehouse Commissioners I do not know whether we have protested to the State Tax Commission. My business has been largely in connection with cost of service analyses, both for rate purposes and for the use of the management, and the general mechanics which surround the operation of the railroad.

157 If a through rate is fixed for a given commodity shipped in interstate commerce through North Dakota, North Dakota will produce a greater profit per mile of haul than the other states, if you assign the revenue on a mileage prorate. If you assign it on a proper basis that will not be so. The cost of carrying the train or a ton of freight a mile in North Dakota is less than it is in most of these states. The price that the shipper is paying is not the same for the move-

ment in North Dakota as it is for the other higher cost states, and if it were not for those higher cost states the shipper would be paying a smaller revenue, and, therefore, your assumption is fallacious when you assume that a shipper when he buys transportation from Seattle to Minneapolis pays the same amount for every mile that that shipment moves in North Dakota that he does for every mile it moves in the State of Washington or any other state. It is certainly clear that the movement of a mile in the state of Washington, for example, over a grade which would involve a lifting of that ton of freight fifty feet to the mile is more valuable to a shipper than moving the same ton in the State of North Dakota on a level grade. His problem is to get the shipment from origin to destination. It is true he pays a through rate that nobody says what part of that goes to every state through which it passes and our problem is to find what part does go to North Dakota.

Taking a commodity which is being shipped from Seattle to St. Paul with a rate fixed upon a competitive basis with the Panama Canal, what the shipper wants is to get his goods from Seattle to St. Paul. We do not have to reduce the rate to St. Paul because of water competition but if
158 the movement was to New York as a general proposition we would. I do not know whether that rate would be based on any laminated rate structure. We know that any and every rate is based on someone's judgment that it is delivering some net to the system over operating cost or the rate would not be made. This is absolutely true in all cases. It is against the law to quote a rate that is less than the cost of handling the shipment. As a practical matter, we do not make rates for less than the cost of handling the shipments. This competition that we have with the Panama canal still enables to make money beyond the cost of operation on transcontinental shipments. A shipment made from Seattle to St. Paul would not have the rate figured on a mileage basis. Practically no rates are based on an absolute mileage basis, that is none in which rates are doubled with mileage or anything like that. The minimum below which you cannot go is a rate that is sufficient to pay the cost of handling plus some return on the investment. The rates are not different for different railroads, but the costs of operation are not all the same.

My proposition that rates must pay expenses, plus a reasonable return on the investment is true because rates are not made by an individual railroad where there is more than one line involved. They would be fixed by joint conference

and sufficient to pay the expenses of all. The return might be less on a poorly managed railroad, but it would be in excess of cost.

The rates from a city in the west served by the Northern Pacific and Great Northern to St. Paul would be the same regardless of the efficiency of operation of the two lines.

If one railroad lost money on the shipment, it would be unlawful because you would thereby be throwing a
159 burden upon the transportation of your other commodities and have the ground work for a rate case which would bring about a readjustment of rates. These rates are not fixed arbitrarily by the management but are being examined by every railroad commission and the Interstate Commerce Commission. These Commissions make adjustments upward and downward from time to time if the examinations disclose that the rates are not correct or would not produce a reasonable return. I have never contended that the rate structure is a precise, exact or scientific result of the actual cost of operation plus a reasonable return, but my position is that they are in excess of the cost of operation and yield some return. As to whether there is any class of goods which produces a loss, I have not made a study of every class of goods that moves through every mile of the Great Northern Railway, but I admit that it is not as exact as fixing a measure for taxation purposes, but I do say that the Commission has a minimum rate level in mind and will check you not only for making rates too high but for making them too low, and I have been in cases where the Commission has denied the right to cut rates.

In making rates for products from North Dakota to Minnesota, the rate-making bodies make the rates just as low as they think they can and stay out of court. It is an evolution of a structure which was put in by the carriers years ago when the country was building up and has been modified by the carriers and the Commission from time to time as circumstances arose or demanded revision.

I do not say that you can assign to any state exactly the share of hauling an interstate shipment through that state to the last dollar and cent, but I do say that you can do so as a practical matter, and I have done it in Exhibit 12. The only items of expense on Exhibit 12 that have been
160 assigned to North Dakota on formula are a small item of equipment rents and joint facility rents which are about 3% of the total. For fuel for locomotives I assigned the fuel consumed by the locomotives operating in the state

which is specifically labeled and ear-marked for the specific locomotive which it is used for. A fuel ticket is issued giving the locomotive number, the date, and the run of the engine and the cost of the particular fuel. Where an engine runs west from Williston into Montana or crosses any state line, the entire fuel consumed on the run is divided on the basis of the miles made in each state.

Train supplies and expenses include several items which are apportioned on different bases. Lubricating of cars which is probably the principal item, is assigned to the State of North Dakota on the basis of the car miles. The engine house expenses is the expense of the particular engine house located in the state of North Dakota and North Dakota gets no share of the expenses of engine houses located in other states.

Engines used in North Dakota are sometimes housed in engine houses outside the state and engines used in other states are housed in North Dakota also, but there is a 400 mile operation in the State of North Dakota. The biggest portion of our engine terminals and at Grand Forks and Fargo where the end is on the state line and at Williston where it is 10 miles from the state line. When you take the fuel on an engine from Williston west and assign fuel for 10 miles compared with the total length of the movement, you assign two or three per cent. on the basis of that mileage prorate, and 90% that is consumed by engines that are operated entirely within the State of North Dakota.

Where we haul 100,000,000 net ton miles of company freight outside of the State of North Dakota for the benefit of North Dakota operations, the cost is not added to
161 the cost of service in North Dakota but is added to the cost of service in whatever state the movement occurs in. It is not added but it is there already and it is not taken away from those states. It is a part of the cost of operating the system in Montana.

I do not know of any situation which affects the State of North Dakota, similar to the absurd result produced by allocating the revenues from ore shipments between Minnesota and Wisconsin on a mileage prorate. That illustration concerns only Minnesota and Wisconsin. However, if the Mesabi Division operations had been eliminated from the system operations, both the revenues and the expenses, the assignment to the State of North Dakota would be smaller than I have found on Exhibit 12, and by leaving that movement in the states outside of North Dakota, I have to

that extent favored the State of North Dakota. I made the illustration of the absurd result produced by using the mileage prorate on a shipment of iron ore to illustrate the errors of the mileage prorate which exist in all mileage prorate ascertainments to a greater or less degree. I know of no other instance where it is evidenced to such a marked degree as we have no other traffic that moves in such volume between two terminals.

I stated that we made our report to the railroad commission on the basis of the mileage prorate under protest. I did not say that there was no law or rule of any rate-making body which required the report to be made upon that basis. The State of Minnesota makes the taxation of railroads on a gross earnings basis and prescribes that interstate revenue be assigned to Minnesota on the basis of a mileage prorate. Being compelled to make that computation for the State of Minnesota where we have the largest ton miles on the system, we have continued that method to other states and have determined our interstate revenue on that basis. Many other railroads do the same thing and many do not. I know of one large railroad operating through the
State of North Dakota that does not follow that basis
162 at all. They take the mileage prorate of the system revenues to Minnesota and take the balance of the interstate revenue and divide it on a mile basis regardless of cost and determine the same in the State of North Dakota and the State of Washington and the State of Idaho and every other state that they operate through just as a means of putting a figure in the report.

I do not know of any other railroad which uses the method which I have developed in Exhibit 12. It has been talked of for years—as much as eight or ten years ago I worked out a distribution of revenue on that basis and introduced it as an exhibit in some rate cases. It has not been gotten up overnight for the purpose of this case. No state has ever raised any question as to the assignment of interstate revenue to that state by the average revenue per ton mile basis or any other method. In fact the statistician for one of the other railroad commissions testified that the carriers were at liberty to state any figure they wanted in that column no matter what it was. That was Mr. Bitney speaking for the state that already compelled you to keep the mileage prorate for taxation purposes. He testified that that did not bind you as to what you should report to the railroad commission and that you could report the interstate revenue on any basis you saw fit. These reports to the railroad commission

are matters of public record and are put on the shelves in the commission and very little use is made of them thereafter so far as the interstate revenue is concerned.

I have never appeared before a tax commission and do not know who has appeared and do not know what basis they have used, but so far as I know, they have never at-
163 tempted to use the method of allocating gross revenue among the states which I have followed. I never prepared figures on this basis for my tax department until August, 1934. I did not present similar figures for any other states.

The application of my method of computation to the State of Washington would not produce a great increase in our taxes in that state. They work up a five factor formula similar to the one advocated by the defendants in this case and then, finding that it assigns to Washington little or nothing, as is necessarily the case when revenues are assigned on a mileage prorate, they throw the figures out of the window and say that they have no probative value and that we will assess you three or four times more than those revenues show, so that the State of Washington now pays no attention to the five factor formula. The assignment of interstate revenues on that formula shows that Washington is not even earning its operating expenses in any year and could, therefore, have no value on the theory advocated by the defendants in this case. We have the situation that the state which has an advantage from the formula uses it while another state where the factor would show that the property is worth less than nothing says that the formula is worth nothing.

I have never advocated that the method of spreading revenues on a mileage prorate should be applied to Washington and even if I had, it would have been given no weight by my listeners. I do not know what the carriers have advocated in their appearances before the various tax commissions.

The formula which I said was thrown out of the window in Washington is the formula which the state is advocating here, the five factor formula which would give a figure of about one-half of the assessment made in Washington. I do not know what our railroad advocates out there or
164 whether it has advocated the system developed by me in any other state except North Dakota. I do not know whether North Dakota is the state which would receive

the greatest blow by the use of my formula. I would be surprised if it would not result in a very material reduction in Montana, but the State of Washington is already assessing on a basis practically what would be developed with a system such as this. I do not know about Idaho as we have only 100 miles in that state out of 10,000 miles of operation.

If a smaller percentage of our gross revenues is given to North Dakota necessarily a large percentage must be given to other states. Washington would get a large share of it, because on the mileage prorate it is not even earning its operating expenses. When a system earns less gross in states like Washington and Wisconsin on the mileage prorate than the actual operating expenses, it is clear evidence to my mind that there is something wrong with the system. So far as I know, our railroad has made no attempt to promote its use in any other state than the state of North Dakota, although I do not know what they have used. I prepared the figures for the North Dakota brief but have not prepared any similar figures for briefs used anywhere else.

I prepared the figures for North Dakota about the latter part of last year or the first part of this year and subbsequent to August and September, 1933, when the 1933 North Dakota assessment was made. We got such a shock when we got that assessment that it was evidence there was something radically wrong with the situation and began to look into it to find out just what the difficulty was.

I did not develop this theory for the express purpose of using it in this lawsuit or in fixing future North Da-
165 kota taxes. I developed and used it ten years ago. I have used it for the purpose that I am using it here, to assign interstate revenues to the various states through which the traffic moves in identically the same method that I have used it here for the purpose of developing the net earnings by states. I have not attended any tax hearing and have not used it in tax hearings and have not prepared any figures on that basis for any tax hearings before the 1934 hearing.

Referring to Exhibit 13, the reason for the larger number of tons of revenue freight originated per mile of road outside of North Dakota is very largely the enormous amount of iron ore tonnage shipped on our Mesabi Division which is a shorthaul shipment of relative low class freight, although very profitable freight.

The ore movement in 1932 was at a lower level than in any year since 1893, so it cannot be taken as indicative of the

future we hope. If I used any other state on the entire system, I would get the same result so far as the 1932 comparison with 1930 is concerned. The origination of that shorthaul iron ore freight makes our system average higher than the average of any state except Minnesota.

Exhibit 15 showing freight revenue per revenue net ton mile covers only intrastate traffic. I have not made a similar computation as to interstate traffic because the interstate traffic is divided in our reports on this erroneous mileage prorate. I do not contend that the actual relative situation between the states is as shown on this exhibit, because there are different commodities and different length of haul, but I do say it is an indication that the state commissions themselves who are setting out to make as low rates as they can justify for the benefit of the public, recognize the
166 higher cost in other states, and this exhibit which shows the revenue on the intrastate freight traffic only indicates that to a certain extent, not to the degree as shown on that exhibit.

I would not say that local boards of railroad commissioners do not have much to say about rates any more. We have thought they could go pretty far in the matter. Intrastate rates like other rates have been developed through a series of years and findings of commissions have increased or decreased them from time to time.

The revenue per ton mile has steadily decreased during the past few years. It has not been increasing. It increased, I think, in the year 1932 due to the absence of this iron ore traffic and that alone, but that does not alter the fact that the general level of the rate per ton mile on each individual traffic considered alone has been decreasing. The short iron ore movement in 1932 effected an increase to the system because the ore moves at a rate lower than the average revenue per ton mile for the system.

In 1928, our revenue per net ton mile was $.01027. In 1929 it decreased slightly to $.00997. In 1930 it was $.00984, in 1931 $.01030 and in 1932 $.01063. From 1930 to 1931 the revenue from iron ore dropped from $9,976,000 to $4,700,000, less than half and in 1932 to $608,000, while in 1928 the revenues from that traffic were much in excess of $10,000,000. The fact remains that our revenue per net ton mile in 1931 and 1932 was in excess of the years 1928, 1929 or 1930. The revenue per net ton mile on this iron ore traffic is ten to fifteen per cent. of our total revenue and has a revenue per net ton mile of six or seven mills compared with about 1c on the rest of the traffic,

so that the disappearance of the six or seven mill traffic naturally raises the average without, however, indicating
167 that the rates are being increased on the traffic as a whole.

This iron ore traffic is the same traffic which I was using in the previous exhibit to show that North Dakota did not originate as large a share of the revenue traffic as the other states, and that revenue is probably the most profitable revenue on the system, even at the low rates, because of ease of operation.

You cannot deduce from a consideration of gross revenues that North Dakota mileage is more profitable than it used to be in proportion to the system. You are talking about gross revenues and conclude that North Dakota is more profitable because we have eliminated a low revenue commodity, which, however, is more profitable than anything handled in North Dakota and the elimination of that traffic has not increased the net profit on any business from North Dakota or made the property any more valuable.

My Exhibit 12 does not show that the loss of that traffic in Minnesota increased North Dakota's percentage of the business, and that exhibit is worked out on a correct determination of all the factors as they actually existed, eliminating the iron ore traffic when it was eliminated. You cannot argue from revenue per ton mile as to the profitableness of the business.

I testified that during the last several years we have lost a very valuable source of revenue in Minnesota. I would concede that possibly that increases the percentage that was assignable to North Dakota and my Exhibit 12 shows that in the year 1932, the percentage assignable to North Dakota was more than in 1931. I am referring to the percentage of system net earnings in North Dakota.

Referring to Exhibit 17, I stated that our bonds commanded a higher yield in 1933 than they had before or since.
The yield to maturity which was demanded in 1932
168 showed the value that the investors were putting on the property at that time and under the conditions which then existed and at the time when the assessment was being made that is at issue in this case. In 1933, all investments were affected with panic psychology but that situation did not exist in 1932, and we had practically the same figures then. Certainly, the panic psychology in 1932 did not exist to the extent that it did in 1933. I would say that that difference is reflected by the difference in my percentage. It is

a reflection of our decreased earnings and if it had not been for the past record of performance, the yield to maturity demanded would have been still higher. That yield is lower because of our past record of earnings and not because of the instant earnings. At that particular time, nobody would be willing to take 11% on his money for property like the Great Northern that was not then earning bond interest. The earning capacity is higher now than it was in 1932, but we are still not earning our bond interest. I would not say that the picture for 1932 was convincing evidence of the future value of the railroad.

As far as the market value of securities is concerned, my opinion is that the current year's figures are the most reliable evidence of the value of the property at that time as an index of what the public is willing to pay for the securities of a corporation considering all its past history and all its future prospects. When investors pay $20 a share for Great Northern stock which has not been paying dividends for some years, the price is based on what they hope to get in the future. While that is the general rule on a normal market situation, I think that in the abnormal situation that existed in
1932, you might be justified in going back three years.
169 I do not think you would be justified in going back four
or five years to a level that was above anything that we had before and, from Mr. Beidelman's testimony, way in excess of anything we now expect in the future.

Even if a five year period had been used in the past, I do not believe that the perpetuation of an error adds anything to accuracy.

I said yesterday that a company with steadily increasing earnings has more prospective value than one with steadily decreasing earnings even though their five year average earnings are the same. The long time result of using the five year period or one year period would not be the same. Heretofore in using the five year figure, there was small variation from year to year and if that were true in 1932, I would say the use of the five year figure was all right. There were increases and decreases but nothing like what we experienced from 1929 down to 1932 which was unprecedented. Using five year averages heretofore when no error resulted is no reason for using them now when error does result.

The value that people are putting on their stocks and bonds is dependent not only on the present value but on the past performance and anticipated future of the company. The prices paid in 1930, 1931 and 1932 were influenced by the

high prices of 1928 and 1929, so by using a five year figure, you get a cumulative effect put on the large earnings of the fourth and fifth previous years.

There was a general increase in our stock and bond values from 1925 to 1929. There was a boom in 1928 and 1929. I would not say that purchases of railroad stocks were made on a speculative basis and not on the basis of actual expected earnings. Railroad stocks, and certain Great Northern stock, has not been the medium of much speculative buying because of regulations limiting their profits and requiring them to turn over half of their profits over 6% to the Government and limitations on rates, wages, etc.

170 The fact that taxing authorities in 1929 considered the lower stock and bond values of 1924 and 1925 is not a reason now for giving effect to the higher stock and bond values of 1928 and 1929, because of the extent of the difference between the five year average and the three year average.

My three year figure includes the first three full years after the depression commenced and does not include any time before that.

In Exhibit 20, showing the net railway operating income, I first found the percentage of decrease between the average for five year periods ending in 1931 and 1932, and then between the three year periods and the single years of 1931 and 1932. In all three of them, I have taken into account the decrease which occurred in the year 1932 and found that they average 52.73%. In the bottom table on the same exhibit, I did the same thing with the average market price of stocks and bonds except that I used a three year period, a two year period and a one year period and took the average of those three.

There is a material amount of mileage traveled in a terminal for which no credit is given on the mile haul of the road. The purpose of these terminals is to furnish efficient loading and unloading facilities. In loading and unloading freight at any town along the line, there is movement back and forth which is not counted in the mile haul of the freight, but the movement in an intermediate station where there is no switch engine may be 200 ft. and is not at all analogous to a movement in a terminal like Minneapolis and Seattle, where the movement would be four or five miles. You do not move the whole train around to take out or put in one car, but simply cut that portion of the train that has the car to be set out.

171 It is not a fact that it is cheaper to load or unload at a terminal than at a prairie station. Because in a terminal, the car is handled by sometimes four or five different switch engines and spotted for loading. Where we don't have the switch engines, we use the locomotive attached to the train because the volume of business does not warrant a switch engine and it is a shorter movement. Every car that is loaded or unloaded at a country station has to be cut out of a train or put into a train.

I did not discuss any unfairness in combining car and locomotive mileage. I believe that as a general proposition, the average cars per locomotive mile is larger outside than inside North Dakota. I have not considered whether it is unfair to combine locomotives with cars in one factor.

I stated that the weight of carloads in North Dakota averaged about 16 tons while they average 27 or 28 tons outside North Dakota. The ore movement has some effect on that but that is a relatively short haul movement so that the weight and number of car miles made in that movement would not be controlling. You can take the year 1932 when there was practically no ore movement and the average load per car for North Dakota is 16.1 tons whereas the average for the system which includes the low North Dakota figure in that year was 19½ tons, and if you eliminated North Dakota, it would be in the neighborhood of 24 or 25 tons.

Agricultural products weigh pretty good, around 42 or 43 tons per car. The low average loading in North Dakota is due to the l. c. l. freight in small loads on branch lines the year round which is not offset by the heavy movement of agricultural products for short periods. This is true all over the system but exists to a greater extent in North Dakota. In a year when the ore shipments are eliminated we find that carloads in North Dakota average 16 tons while the system including North Dakota is 19½ tons.

172 Referring to the shortening of the railroad by tunnel construction, the last tunnel constructed was finished in 1928, but we have had smaller tunnels constructed since then. The 1928 tunnel and grade revision shortened the line 9 miles. When those tunnels were built the snowsheds and the whole investment on the old line was charged off to capital account, because that does not affect your operations. The property retired was written out and the property constructed enters the account. I think the charge in that case was made to profit and loss on the tunnel.

Referring to the effect on our credit if we have to pay this extra $600,000 in taxes, the facts are that the Great Northern is living on borrowed money right now and if we pay out this $600,000, we would have to borrow $600,000 more and the more you borrow the harder it is to borrow and the higher rate you will have to pay, and it would increase the difficulty of borrowing the necessary sums to continue operation. Having to pay this extra $600,000 would not mean that we would be forced to go out of the interstate railroad business. I hope we could still squeeze another $600,000 out of somebody, but I don't know where. There are lots of railroads in worse shape than ours and still operating and lots in better shape. The Great Northern never had any floating debt at all until last year and our floating debt is now increasing every year, and if we did not borrow money we would be out of business.

The figures in my exhibit 12 which are taken from the reports to the Railroad Commissioners of North Dakota may be shown in the reports to the State Tax Commission, but I am not sure. Some of the figures are shown as taken from reports to the Tax Commissioner, but to the best of my knowledge, these figures are reported only to the Railroad
173 Commissioners and certain other figures in Exhibit 12 are ascertainable only from the current records of the Great Northern Railway Company. There are about 2 cases where the basic data is not shown in the reports to the Railroad Commissioners or Tax Commissioner of North Dakota. One case covers the interstate revenue which is reported to each state, but the sum of that amount is not shown in the North Dakota report.

I am not challenging the good faith of the North Dakota Board of Equalization. I did not say that they would be thinking up a tabulation of this kind themselves if it had not been presented to them.

Redirect Examination.

By Mr. Dorety:

Our report to either the North Dakota Railroad or Tax Commission show the number of ton miles and operating expenses in the state and reports to the Interstate Commerce Commission show similar figures for the system. From these figures you can compute the cost per net ton mile for North Dakota and also for the balance of the system, and they would indicate a lower cost and less dollars of service per mile in North Dakota than on the balance of the system. The report that we make to the North Dakota Railroad Commission

includes the report to the Interstate Commerce Commission which covers the system operation and also certain schedules applying only to the state of North Dakota, so that the sytsem figures and the North Dakota figures are both in the report to the North Dakota Railroad Commission.

The figures for cost of reproduction less depreciation are reported to the North Dakota Tax Commissioner but not to the Railroad Commission. If it had occurred to the Tax Commissioner or Board of Equalization of North Dakota to inquire whether an allocation to North Dakota on the basis of track miles, car and locomotive miles, ton miles, etc. was excessive, or rather whether that sort of an allocation exceeded
an allocation based on dollars worth of service per-
174 formed, and if you also assume that they had available the reports of the Railroad Commissioners of North Dakota, it must have been apparent from the figures which they had that an allocation based on dollars worth of service performed must have been less than the allocation which they were using. I do not mean that they could make the same computations that I have made, but they could get the indication just as I have the indication.

I would not say that my method of apportioning interstate revenue is applicable in any greater or different degree to laminated rates which are the specific and direct result of applying two or three layers of established scales than to a through rate which is not so constructed, but which is merely the result of estimating the cost of performing the service plus a return on the plant used. Whether these rates were in fact made by the laminated basis or not, they are in effect made on that basis. A transcontinental rate which because of the higher cost in Washington and terminal costs might admit of a rate no less than 65c a hundred which would be sufficient to cover cost and some return, whereas if we did not have the higher costs in those states and had the same costs that existed in North Dakota, it would be possible to make a rate of 55c or 50c and, therefore, the additional cost in effect is in every rate whether it is so set forth as a separate item or not and gives every rate the effect of a laminated rate.

The Court: May I inquire just one question here that I am not clear on what the contention of the plaintiff is. Without regard to how the rate is constructed, whether by laminated process or not, the result necessarily is in the rate, is it not?

A. Yes, sir.

The Court: For taxing purposes what difference does it make whether it is laminated or not laminated?

175 A. It does not make any difference except when they use the mileage prorate of interstate freight revenue to assign to the State of North Dakota and thereby take into the State of North Dakota some revenue that belongs to the State of Washington because the costs in the State of Washington were in effect included in the rate as made. We cannot make a rate that is less than cost plus a return. The fact that we have higher costs in Washington means the rate is higher than it would be if we had the same conditions that we have in North Dakota. Our contention is that a method that takes revenue from the State of Washington and leaves that State without sufficient revenue to pay its operating expenses and a proportion of a through rate that is passing through North Dakota and assigns to North Dakota a revenue that pays its operating expenses and two or three times the return on the property in North Dakota that the system is earning is a fallacious method of distributing revenue.

The Court: Of course, I only asked you the question for information, but the thought is running through my mind the cardinal principles involved in a tax case, I do not say the sole or only but the cardinal, was the earnings of the property used in the State?

A. That is correct.

The Court: With the value of stocks and bonds capitalized at a reasonable rate?

A. That is correct.

The Court: And with that thought in mind I had some little difficulty in appreciating just what difference the laminated versus any other rate would make as applied to a tax proposition. I can readily see the proposition of the rate making.

176 A. The problem as you state is to determine the net earnings applicable to North Dakota and that is what I have done on Exhibit 12. The net earning is determined by assigning to North Dakota its interstate revenue, what I say is a proper proportion, and a correct proportion of the interstate revenue and charging to North Dakota its operating expenses absolutely incurred within the State and thus determining the net. The whole difference between the figures reported to the Railroad Commission and the figures I have used on Exhibit 12 amount to a reduction of about eleven per cent of the gross assigned to North Dakota and that comes about on the theory that the mileage prorate assigns too much of this through revenue to North Dakota by taking away from

Washington some of the share that belongs in there and taking away from Minnesota some of the share that belongs in that State.

In Column 3 on Exhibit 11 I show 50c per hundred ton miles as the average cost of operating in North Dakota. If the miles in other states were just like those in North Dakota and had no terminals or mountain construction and had the same cost in North Dakota which would give Washington a cost of 50c instead of 95c, a rate of $378.00 on this particular shipment would pay the cost plus a fair return. If that assumption were correct and if the entire rate were $378.00, North Dakota's share of the total earnings on my method of allocation would be exactly the same as it is in Exhibit 11. If we had equal conditions per mile both as to operating and plant and had a rate just sufficient to pay the operating expense and return on the investment, my method would give North Dakota in interstate revenue on that shipment exactly the same that it gives under actual present operating conditions.

177 The fact that instead of showing a rate of $378.00 on Exhibit 11, I show a total rate of $480.00 is due to the higher cost in the states other than North Dakota. The difference between $378.00 and $480.00 or $102.00 is solely and entirely the effect of the higher operating costs and more valuable plant in the other states and that is the sort of thing that I have been referring to as a lamination. If we put that lamination of $102.00 onto the rate in order to cover the costs in other states, and then spread the entire rate including that $102.00 over North Dakota on a mileage basis, the effect is to give a revenue in North Dakota of $106.67, when in fact the cost in that state and the amount included in the rate for that cost was $84.00.

If the mileage and the costs were alike in all states, and if the total rate were, therefore, $378.00, North Dakota's share of that $378.00 would be $84.00, whereas the mileage prorate as shown in column 8 gives North Dakota $106.67. The additional $22.67 is a portion of the extra revenue which is provided for extra costs in other states.

Referring to the iron ore lines, if a total rate were established which would pay all of the Minnesota costs plus all of the Wisconsin costs plus a return on the investment in both states, and if that resulted in a dollar rate which could pay a fair return upon the total investment of $32,000,000 in the ore lines, and if the question then came up in a tax case as to how the $32,000,000 would be apportioned between the two states, or how the revenue should be apportioned, and if the sugges-

tion were made that for tax purposes, every mile is equal, and if that suggestion were carried out for tax purposes, the State of Minnesota would take 90% of the gross revenue to apply to 50% of the cost and 50% of the investment while Wisconsin would have 10% of the gross revenue to apply to
50% of the cost. The result would be that of the $32,-
178 000,000 total value, approximately $25,000,000 would
be assigned to Minnesota and $7,000,000 to Wisconsin, when in fact there is actually $16,000,000 worth of property in each state used jointly for the transportation of this commodity.

If it be assumed that the entire 100 miles were worth $32,-000,000 and if it were also assumed for the purposes of a tax case that each mile was equal, because the entire rate paid the same rate of return, that would give the same value per mile in each state or each mile would be worth 1/100 of $32,000,000 a mile. If the Wisconsin portion were to be taken over by a separate independent corporation, I am sure the original owner would not sell the Wisconsin portion which cost $16,-000,000 or a million dollars a mile for a price of only $320,000 a mile.

The same situation as to the errors of a mileage prorate which exist on the ore lines also exist in principle on the North Dakota-Minnesota traffic where the heavy expense of the Minnesota terminal operation is disregarded in making the mileage prorate of revenue. It is the same principle but different in degree and this same principle applies to every interstate shipment moved everywhere on the system.

The fact that in Exhibit 12 I have prorated small amounts of expense between North Dakota and adjacent states on a mileage prorate is not inconsistent with the contentions that I am now making. In the case of train operations between Williston and Havre, the same tonnage and the same cars are handled throughout the entire district, the wages paid are at the same rate, the operating conditions are similar in general and a mileage prorate of a cost where the operations are homogeneous, as they are in that movement, is not doing violation to any of the facts in the case. If costs were the same
all over the system for handling traffic, the mileage pro-
179 rate would be all right for handling revenue and would
give the same result that I have reached. If the 50c operating cost in North Dakota as shown on Exhibit 11 existed likewise in every other state, so that the through rate shown on this exhibit would then be $378.00, I would then see no objection to the use of the North Dakota allocation formula

in tax cases. You could get the same result out of the mileage prorate as you would get out of the system I have employed. I am criticizing the state's basis of allocation only when applied to a railroad which is not homogeneous.

If the $480.00 rate which I have shown on Exhibit 11 and which pays 4% were forcibly reduced because of Canal competition until it paid only 1%, so that instead of being $480.00 it would be perhaps $420.00, the comparison which I have made in Exhibit 11 between the mileage prorate and the prorate based on dollars worth of service performed would still apply. The same criticism would apply to the mileage prorate because the effect of the higher cost in the other states would still be in the rate and operate as a barrier below which the rate could not be reduced, whereas, if the costs were the same as those in North Dakota, the rate would be lowered still further.

Recross Examination.

By Mr. Shaft:

Referring to the grave injustice of applying the mileage prorate of gross revenues on the Mesabi Division in Minnesota and Wisconsin, that method of prescribed by the statute for determining the amount of taxes to be paid to the state. There was a time when there was a separate portion of the taxes and separate rates paid and that is not true at the present time, and for 15 years past. There is a separate rate for the dock service that goes to Wisconsin and the balance is prorated, but that injustice still exists there to a certain extent.

180 Referring to our railroad running past and serving all of those mines in the northern part of Minnesota, I would say that the value is dependent upon the net earnings of the property and not upon the cost whatever that might be. We have no monopoly on that traffic. The D. M. & N. serves those mines, some of them on the same tracks that we use, but the whole value of the plant is dependent upon the net they can produce. In 1932, when we did not have any ore, that property was worth less that what it cost that year. It depends upon your net which when capitalized might be more or less than the cost.

Referring to these laminated rates, I would say that the zones are fixed definitely with reference to the cost of operation. I do not say that the rate of lamination is exactly the sum of the cost.

Assuming that one of the zones commences at Leeds, N. D. and goes west, I would not say that there would be a great

deal of difference between the cost of operation between Leeds and Grand Forks and between Leeds and Minot. It runs through practically the same kind of territory without mountains if you stop at Minot, but not if you go to Williston. The route from Minot to Williston is a very costly operation. It is the most costly operation in the state of North Dakota and is more costly than eastern Montana. That is because of a heavy grade and in the Badlands. There is a 1.72 grade in that vicinity and it is so bad we have a separate engine run for that 127 miles and in the next territory west we run 300 miles.

I do not say that the rate schedule is precise or exact but is just an indication of situations.

Referring to a rate on transcontinental traffic which has been reduced by Panama Canal competition so that it produces a 1% return on the investment, the object of that
181 transportation is to get goods from the west coast to the east coast. We get rate from one and to the other. Over some portions of that route it is very costly to carry the goods and over other portions it is cheaper. North Dakota is one of the cheaper portions. It is not a fact that it is more profitable to haul such goods over North Dakota mileage than outside mileage. I think the rate is built up to include the higher cost in the other states and that if the North Dakota situation existed throughout the system you would get a still lower rate but your net would not be any more. We don't get that lower rate because of the high cost of operation in the west but we get the same net on this business. Profit is determined by subtracting the cost of operation from the income. The income from operation in North Dakota on a shipment from which the rate is fixed on a competitive basis does not give a bigger spread in North Dakota than it does in other states.

Our railroad and the Northern Pacific compete for the same transcontinental business and have approximately the same terminals in the Twin Cities and on the west coast, but the cost of operating the two railroads is not identical. Nor is it identical in any state along the route. The Northern Pacific take a route quite a bit to the south of ours, but the Great Northern uses the lowest mountain passes. The rate on a shipment of freight from St. Paul to the cost would be identical on both railroads, but the cost of carrying it per mile would be different and would probably be different in each state along the route. In fixing minimum rates below which you might not go, the Commission usually figures the cost by

all the roads that will handle the traffic. If the rate is above the minimum, it simply means that each one is getting a varying percent of profit. They use the average cost of that haul as a measure and then they have a certain prescribed
182 minimum below which they will not go no matter how low the costs are.

I think it is probably true according to Mr. Bowen's map that a shipment of freight would go a good deal further in going through Montana by way of the Northern Pacific than it would by way of the Great Northern, and you could assume that the cost of operation per mile would be approximately equal.

My formula would produce different assignments to North Dakota for the Great Northern and Northern Pacific, because the Northern Pacific's net earnings on their system are different from ours, which is equivalent to saying that the earnings per mile or per dollar invested in North Dakota is different for the two railroads, and I think that is true, but my system would show what would be correct for the Northern Pacific just as it does for the Great Northern.

My system does not assume that earnings are exactly proportionate to cost but that the general level of them must necessarily cover the cost in order to permit you to remain in business and that no rate can be made below a minimum that will not give you some return. My system does not assume that costs and earnings are constant in their relation exactly. If you were to take your total earnings and break them up on a cost basis, you would get entirely different figures from what I have here. The percentage of cost in North Dakota instead of 11 or 12% I think is around 17%.

My system does not assume that the relationship of cost plus a return on the investment and earnings is constant. So far as the interstate freight is concerned, it assumes that a through rate that is made for the movement of a shipment through a group of states does not give you variable rates of profit or loss in different states on the same movement.
183 That is the basis of the assumption and it is applied only to the interstate revenue and has no application to the intrastate or express or mail revenue or any other revenues.

Redirect Examination.

By Mr. Dorety:

My system assumes that if one state provides a million dollars worth of plant in the form of a tunnel a mile long and another state provides a million dollars worth of plant in

the form of a hundred miles of track, and if the shipment earns 6% on the total, each state should get 6% on its part. It would give the Northern Pacific different credit from the Great Northern in North Dakota dependent on the number of miles of each route in the state and also on the amount of expensive construction. If the Northern Pacific had mountains in North Dakota and a level line in the west, my system would just reverse the allocation that I get for the Great Northern.

Mr Shaft was perfectly right in saying that North Dakota would get more profit than other states out of the through rate on condition that by using mileage prorate you give North Dakota some of the extra earnings that are earned in other states.

(At this point the plaintiff concluded its direct testimony and rested its case.)

LYMAN BAKER, a witness called on behalf of the defendants being first duly sworn, testified as follows:

Direct Examination.

By Mr. Shaft:

My name is Lyman A. Baker. I am a tax specialist and reside at Bismarck, N. D. After graduation from college, I engaged in civil engineering for 5 years and in 1914 entered the employ of the North Dakota Tax Commission where I remained 19 years. I was Deputy Tax Commissioner during the last 13 years, and it was part of my duties to prepare all valuation data in connection with railroads and other public utilities for the use of the State Board of Equalization. I had general charge of all of the tax work in the office
184 in addition to the valuation of the public utility property and have studied and considered the general tax field.

I have attended five or six sessions of the National Tax Association and attended the session in 1923 when railroad taxation was specially under consideration. I am familiar with their deliberations and conclusions. Since January 1933, I have been engaged as a tax specialist independently of the State Tax Commission.

Market value is made the basis of ad valorem taxation under the statutes of North Dakota. The determination of market value as to general property under normal conditions is fairly easy. The value of commodity goods and personal property may be ascertained from local market prices.

The valuation of land is determined on the basis of actual sales of similar property, and the valuation of structures is based on cost of reproduction less depreciation modified by the Commissioner's knowledge of general market conditions.

These methods are not applicable to the valuation of railroad property because that is not bought and sold on the market and special methods have been developed for valuing railroad property.

The principles of valuation that are ordinarily followed have been laid down by federal courts and are the guides which are ordinarily followed in valuing railroad property. The principles are broad in their application and consequently there is some room for disagreement. The first step in the valuation of railroad property is to determine the value of the entire system. There are two classes of evidence ordinarily considered, first the past earnings of the property, and second, the average market price of stocks and bonds over a period of years. It is difficult, if not impossible to accurately determine net earnings by states. Consequently net
185 earnings or the capitalization of net earnings within a given state is an impracticable method of valuation. The stock and bond values reflect value of the entire property of a railroad. Neither the capitalization method nor the stock and bond method afford any basis for making a direct determination of that part of a railroad system within a given state. The past value of the railroad involves the entire property and then apportioning the value to the various states in which the property is located.

Referring to the stock and bond method, market values of the securities of a company under normal conditions results in a composite estimate of the investing public as to the worth of the property. A railroad is seldom, if ever, bought and sold as a unit but it is sold in small fractions and the theory of the stock and bond valuation method is that the value of the whole property may be determined or may be fairly judged by the price of the securities. Under this method the average sales price over a fixed period of time of each class of stock and of each issue of bonds outstanding is found and the average sales price for each class of stock and each issue of bonds is multiplied by the number of units outstanding. The addition of the resulting totals gives the total stock and bond value as reflected by sales during the test period. The valuation so obtained, however, reflects the value of the entire corporate assets of the company and it is necessary to

make a separation of the operating and non-operating property.

This stock and bond method is subject to some criticisms that do not undermine the method as being of very great value. In the first place it requires a fixed period of time over which market quotations shall be averaged and this period of time must of necessity be somewhat arbitrarily fixed. It assumes that the average price of the stocks and bonds actually sold reflect the value of the entire outstanding issues of each, when rarely, if ever, is a controlling interest in stocks and bonds of a railroad company bought
186 and sold on the stock exchange, and where control is sought it is common knowledge that securities advance very sharply in price. The method assumes that the aggregate market value of the stocks and bonds issued by a corporation is the same as the market value of the underlying property owned by the corporation. I think one of the serious defects in it is that it assumes that purchasers of securities act upon an informed judgment based upon accurate knowledge of earnings, past earnings, present conditions and future possibilities of the property. Another defect is that it ignores the influence of pure speculation in the market on the part of those who do not have any knowledge of the assets or affairs of the corporation. Where the common and preferred stocks of a railroad company have paid no dividends for years and where the future outlook is uncertain, it ignores the fact that such securities are purchased as pure speculations and not as investments by permanent investors. It also ignores the fact that the purchase of stock is governed largely by prospect of present dividends and not by any general conception of earning capacity and the purchase price paid for bonds depends upon assurance that the interest payments on the bonds will be made on the due date.

Stock and bond value reflects value of all of the property owned by a railroad company, including both operating and non-operating assets. Since the non-operating assets are otherwise assessed and the duty of the board is to assess only the railroad property it is necessary to make some deduction of the value of those non-operating assets.

The State Tax Commissioner has used a composite method of assigning a value to the operating and to the non-operating property based upon two ratios; the relative book cost of operating and non-operating property is used as one
187 percentage figure and the relative earnings from the two classes of assets for a period of years is used as the other percentage, the two percentages are averaged and

the composite percentage is applied to the total stock and bond value and the resulting amount, for instance, as to non-operating property is deducted from the total stock and bond value.

As to the proper test period for averaging stock and bond values, I think that most taxing boards, economists and in fact most railroad men have always adopted the five year period in order to give stability to the tax value so far as the railroad is concerned and also as far as the State is concerned. As far as the State is concerned stability in assessments are vitally important. As far as the railroad company is concerned it is immaterial whether the five year period or a shorter period is used, as in the long run the total assessment would work out the same.

The depression resulted in a collapse in the stock and bond market. The forced selling that occurred during the recent depression brought stock and bond values down to a figure where in the opinion, I think, of most of the investors it did not fairly represent the value of the property. The purchasing power of the dollar from 1929 to 1933 very greatly increased and this resulted in a very great depreciation in security prices as well as the prices of all commodities. In the United States there was a general movement to convert property into cash, due to a collapse in public confidence, and security prices since 1929 have been extremely unstable. Some of the things that affected the security market were the exportation of gold, the policy of the Federal Reserve Banks, the collapse of a speculative bubble, the freezing of banking assets, the wide-spread failure of banks and the almost total loss of confidence on the part of the public in the integrity of American business managements. In North Dakota, in addition to the general depression, we have had drought
188 and crop failure and ruinous prices for agricultural products, and from 1929 to 1933 the extraordinary rise of the dollar in relation to commodity prices resulted in a universal rush to convert securities and other property into cash. The forced sale of securities, the deposit of collateral for bank loans aggravated the decline. As an illustration of what happened Dow-Jones & Company averages of thirty industrial stocks fell from 383.17 in September, 1929, to a low of 41.22 in July, 1932, and the average of twenty rails fell from 189.11 in September, 1929, to 13.23 in July, 1932. The total market value of all common and preferred stocks listed on the New York Stock Exchange fell from eighty-nine and one-half billion dollars in September, 1929, to fifteen and one-half billion dollars in July, 1932.

Despite all these objections to the stock and bond method of valuation, I still consider it as one of the best indices of value obtainable.

Capitalization of net railway operating income is generally recognized as an important element in ascertaining the value of a railroad property. By this method the net railway operating income for an arbitrarily determined period of time, usually five years, is averaged and the amount ascertained is capitalized at a reasonable rate of return. The capitalization method assumes that value can be based on the average profit earning capacity of the railroad and that the amount upon which a fair return has been earned over the test period is the value of the property. Average earnings for a period of five years preceding the assessment date are usually considered. The use of a single year's earnings as the basis from which to determine the value of a railroad property is seldom, if ever, given serious consideration. A shorter period than five years is sometimes advocated and used, but the gener-
189 ally accepted test period is a five year period. The use of a three year period at the present time, when two of the three years, namely, 1931 and 1932, are the worst years in railroad history in the Northwest since the panic of 1893, in my opinion has but little justification. The railroad plant is still in existence and also its capacity to earn. The use of a three year period by the State Board of Equalization in 1933 could only be justified if the Board had positive proof that the average earnings of those three years was a correct index of the future. Manifestly no such proof could be produced. I make that statement because as a general policy the five year period had been the period which had been given the same weight by the board for a good many years.

The capitalization of net railway operating income probably has more serious objections than the stock and bond value. The capitalization method of valuation determines value wholly by past income. It fails to take into account changes that have taken place in the property during the test period. I believe that that would not be a valid objection to it in this case because there has been no particular change in the property. The chief difficulty in the use of this method is to determine a reasonable rate of capitalization. The rate of capitalization cannot well be less than investors are willing to accept in making an investment in the same class of risk under ordinary conditions. When you have a condition such as we have had in the last several years when earnings have collapsed and stock and bond values have collapsed, I do not see any reason for changing the rate of capitalization to conform to the conditions even though many rates have changed. The

securities are in the hands of the public and they have to take their loss. I think it is generally conceded that the rate of return that the company is allowed to earn under State and Federal law is a fair rate to use in the capitalization of net railway operating income. Under the Federal law the
190 railroad rate structure is supposed to permit a return of six per cent on the physical value or cost of the property.

I think that the 6% rate of return is justifiable under present conditions if you take into consideration what has happened to all other property owners. The farmer's income has been wiped out, the business man's income has been wiped out. If you are going to base values entirely upon what property is earning at the present time you would not have any value as to most classes of property.

The assessment of general property in North Dakota has not been reduced in conformity with the drastic and decreased economic return from the property and could not be so reduced without so drastic a reduction in revenues as to endanger the continuance of the functions of government. The State Board of Equalization of North Dakota in my opinion could not grant to the owners of property a drastic reduction in value without gross discrimination against other property owners in much greater economic distress. I think the mere fact that the securities representing a certain class of taxable property are quoted on the market, its earnings are readily available and that consequently changes in the market value of such property may be readily ascertained, does not entitle such property to preferential treatment by a State Board entrusted with the duty of equalizing property values so that taxes shall be equitably distributed according to the market value of all classes of property. Assessing officials and equalizing boards during the last several years have been confronted with a very difficult situation. Values which had been more or less stable for a generation have melted rapidly away. If all assessments had been reduced to conform to actual market value the State and its subdivisions would have ceased to function, as the revenue would not even approximate necessary
191 expenses. Farm property constitutes about 65% of the total taxable value of North Dakota. An economic return from such property as will be shown in exhibits which I have prepared, has decreased about 75% compared with the 1924-1928 average. Interest and taxes and cost of operation undoubtedly have exceeded the gross income by a large margin, leaving nothing for the support of the family or a

return on property. Under such conditions in order to equalize the tax burden in conformity with the value of all classes of property capitalization of five year average net railway operating income at six per cent in my opinion would result in giving preferential treatment to the railroads as compared with other property owners.

There is another very serious objection to the capitalization method and that is where a property is operated at a loss over a period of years there are no earnings to capitalize and no value whatever will be reflected by the use of the method. Such a property undoubtedly would still have a present and a prospective value. Such present and prospective value would be reflected by the use of the stock and bond valuation method. A composite of the stock and bond valuation method and the capitalization method in such case would produce a value of only half the value placed on the property by the investing public.

The criticisms that I have offered of these two methods are not sufficient to render them valueless. On the contrary the two methods are universally approved as the two best evidences of the value of a railroad which are available. There are certain difficulties in connection with either method, neither method is altogether accurate. I think the valuation of any class of property has not yet become an exact science in which there is no room for the exercise of judgment and discretion. Much must be left to the judgment and discretion of the assessing board or official and this is true no matter what the character of the property may be.

192 In the exhibits which I have prepared in this case, I have used the composite method of valuation, giving equal weight to the stock and bond method and the capitalization method of valuation. In order to determine whether the Great Northern railroad in North Dakota has been continuously overassessed as alleged in the complaint of the plaintiff I have prepared exhibits in which the value of the Great Northern Railroad in the state is determined by several different methods for the assessment years 1929, 1930, 1931, 1932 and 1933.

Having ascertained the system value, I proceed to apportion it among the states. The distribution of railroad values among states is probably the most difficult problem in connection with the assessment of railroad property. Its solution is less satisfactory than the problem of ascertaining system value as a whole. Every method of assigning values

to states is vulnerable at some point. There is no uniformity in State practices in making such apportionments, neither is there agreement among railroad tax men as to the proper methods of assigning values to states. Most taxing boards take the position that no single method or factor of apportionment gives assurance of dependable results and that it is safer to use a composite of various factors which more or less accurately measure the relatively market value of the property in the individual states.

In 1923 a committee of the National Tax Association reported to the tax conference, I believe the committee had worked on the problem for a year and that committee recommended the use of five factors of allocation. The factors they recommended were first mileage of all tracks operated, second, physical property, third, car miles, fourth, traffic units, that is ton miles plus passenger miles, and the total operating revenues.

193 The National Tax Association is an organization of state officials and officials of railroad companies and other public utility companies and large corporations, and my recollection is that only state officials and certified public accountants have voting power but the officials of the big businesses throughout the United States belong and attend those meetings.

The committee in its report made the following statement: "There is not a single known accepted basis of allocation that is not weak at some point or another. Any one of them might work out admirably in one state but produce an absurd result in another state. No one method is a safe guide to distribution and hence it is necessary to use a composite basis, employing, however, only those bases that have something to recommend them." The committee considered nine methods of allocation and discussed those nine methods in their report. The methods were track mileage, net earnings, gross earnings, car mileage, train mileage, car and locomotive mileage, traffic units and physical valuation and of these nine methods considered they recommended the five that I previously mentioned and those five, in substance, are approximately what we have used in North Dakota to a greater or less extent for a number of years; the only difference I believe is that we have used car and locomotive mileage and not car mileage. They recommend that five year averages be used as to the business ratios and that the property ratios such as mileage of all tracks and physical property be as of December 31st preceding the assessment.

When I say "we used", I refer to the exhibits prepared by the State Tax Department for the use of the State Board of Equalization.

In the exhibits that I have prepared, I have used the transportation service factor, that is car and locomo-
194 tive mileage, revenue traffic units, gross operating revenues and mileage of all tracks operated and mileage of all tracks owned and operated and leased and operated, excluding trackage operated under traffic rights, also the physical property factor and the net revenue factor. The net revenue factor the committee did not recommend; they recommended that that factor should not be used. I have set up my exhibits using three factors, four factors, five factors and six factors, showing the result of different combinations. I should explain that mileage of all tracks owned and operated and leased and operated, that factor, the way it has been set up, excludes I think approximately one thousand miles of line operated by the Great Northern over property of other companies where the other company owns and maintains the property. I have just set it up as an example. In the factor mileage of all tracks operated I use all tracks operated as reported by the company and that would include all tracks operated under traffic rights.

I have another factor consisting of mileage of all tracks owned and operated, and leased and operated, in which I have excluded trackage operated under traffic rights, but I have not used both factors in the same setup. The use of the transportation service factor assigns to each state such part of the total value of the system as the number of car and locomotive miles run in the state is a part of the whole number of car and locomotive miles run in the system. It is roughly indicative of the relative amount of business done in the state. It reflects the relative use of property in the state, both as to equipment and as to the road itself. This factor ignores the nature of the traffic, the character of the haul, the utilization of car capacity, differences in rates, whether the haul is of high class freight or low, and other equally important transportation factors except the one represented by itself. The use of the revenue traffic unit factor has more to recommend it than the transportation factor. It ascertains how many tons of freight
195 and how many passengers were carried one mile on the system and in the state and from these figures the state ratio is produced. The factor is a composite traffic unit and passenger miles and ton miles.

The gross operating revenues factor assigns values on the basis of relative earnings, is the most commonly accepted factor of allocation, is regarded by some as the best of all possible methods. Intrastate earnings are easily ascertainable and are accurate; interstate earnings are commonly distributed on a mile haul basis. This factor gives weight to the character of the traffic, whether high or low grade, it covers the defects in the revenue traffic units method and in the transportation service method. Until this case came up or it was started I have never heard any serious objection to this method or to the method in vogue on most railroad systems of assigning interstate revenues to the various states. So far as I know the distribution of revenues on the basis of cost of service, which has been advocated in this case, had never been used anywhere.

The all track mileage factor includes not only miles of line but takes into consideration second tracks, third tracks, yard tracks, sidings, terminal trackage and all other tracks. The use of this factor assigns to each state such part of the total value of the system as the total trackage in the state bears to the total trackage of the system. The assumption that underlies the use of this factor is that where traffic is heavier and more business is done the all track mileage is correspondingly great. The all track mileage factor has frequently been given recognition by the courts and has also been frequently condemned where the volume of the traffic carried in the particular state or the ratio of the total traffic carried in the state was out of line with the ratio of all track mileage. The percentage of the Great Northern system
196 assigned to North Dakota by the use of this method is very close to the percentage of the system value assigned to the state by a number of other factors. Its use can possibly be justified in the case of the Great Northern Railway on the assumption that the Great Northern mileage in North Dakota furnishes a large amount of long haul business to the system and that this fact should be given recognition. Much has been said in this case about the large percentage of branch line mileage on the Great Northern system in North Dakota. 61% of the Great Northern mileage in North Dakota is branch line mileage but an important element of branch lines is that they furnish long haul business to the system. Without its branches a main line could not exist. In dividing interline revenues connecting carriers commonly allow branch lines far more than the mileage prorate of the total revenues in recognition of the peculiar value of branch lines.

The mileage of all tracks operated in the case of the Great Northern Railway Company includes approximately 1031 miles of tracks that are neither owned or leased by the Great Northern Railway Company. The trackage is owned and maintained by other companies but the Great Northern has the right to operate some or all of its trains over such trackage. The inclusion of this traffic in the allocation of values by the owning company as well as by the companies having the right to operate over the trackage naturally assigns to the state or states where the trackage is located a value which may not be justified. In certain exhibits which I have prepared I have used this factor in conjunction with other factors.

The physical valuation factor assigns to each state such share of the system value as the reproduction cost of property in the state bears to the total cost of reproduction of the system. The Interstate Commerce Commission cost of reproduction figures are used as one of the several factors in the allocation of values in the exhibits which I have prepared. The chief objection to the factor is that the business in the state may have little relation to the investment in the state. The factor would penalize a prairie state where the investment per mile is small as compared to a mountainous state and where the expense of operation is low as compared to the mountain states. It is the generally accepted theory that cost of property does not reflect value and assuming that this is true that cost of property does not reflect value and if it does not reflect the volume of business done in the state and does not reflect the relative profitableness of that business it would seem that the factor was not entitled to much weight. It does, however, reflect the relative cost of property in the several states.

197

The net earnings or net revenue factor is held by many people to be the most defensive basis of distribution of railroad values if it were accurately ascertainable. Unfortunately, it is not accurately ascertainable and it is given little weight for that reason. It is, however, in use I believe in Wisconsin and several other states and given some consideration. I might say in connection with this earnings or net revenue factor that the National Tax Association rather severely condemned it and I will read that portion of their report. This is a portion of the report made by the committee of the National Tax Association in 1923 on the apportionment of public utility property to states. The report said as to net earnings "Strange as it may seem, net earnings is perhaps the worst of all measures of apportionment. If net

earnings figures were accurate there would be no need of a method of allocation, but the fact is that figures showing net earnings by states are so inexact as to be meaningless.

198 System net earnings are accurate and exact because they represent what is left after deducting the total system operating expenses from the total system gross earnings, but when an attempt is made to ascertain what part of the net was made in each state the task is hopeless. Many state commissions call for a report of net earnings by states and in attempted compliance with the demand railroad accountants have worked out certain formula for producing the figure, but a great part of the system expenses are insusceptible of localization and the result is that operating expenses allocated to a state do not even approximate the true figure. One state is given much less than her fair share of the total expense, another is given vastly more than her proper amount. This is now so obvious and so well recognized that few states pay any attention to net figures by states either for valuation purposes or fixing a ratio for apportionment. In any case, the use of the so-called net earnings measure as a means for determining the apportionment of net earnings is merely chasing ourselves in a circle."

In my exhibits I have used all track mileage as of the close of the year preceding the assessment. Physical property was taken as of the close of the year preceding the assessment. This date was taken as to both of these factors in order that they might reflect changes that had taken place in the property right up to the assessment date as near as might be. The business factors were taken for a five year period. I might say in connection with the business ratios which I have used that averages are generally taken for a five year period in order to avoid the violent fluctuations which might occur if valuations were placed on data for a single year.

199 I have prepared Exhibit A which gives a statement showing the par value of the capital stock and funded debt of the Great Northern Railway Company in the hands of the public as of December 31, 1932, also average market quotations and market value for one year and for the five year period ended December 31, 1932. In this exhibit the Great Northern Railway Company general mortgage gold bonds have been sent out separately. I will read the footnote "Great Northern Series 'A' gold bonds were issued to refinance the Great Northern's proportion of the Burlington-Northern Pacific-Great Northern collateral trust bonds. By reason of the issue of these bonds ownership of 48.59%

of the stock of the Chicago, Burlington & Quincy Railway Company was vested in the Great Northern Railway Company. The bonds are primarily a lien on this stock, were issued to purchase the stock and are secured by a pledge of the stock. The amount originally issued was $115,000,000. On December 31, 1927, $9,141,000.00 principal amount of general mortgage Series 'A' 7% bonds were retired, leaving outstanding $105,859,000.00." I mention this issue in particular because it is commonly supposed to represent the largest single item of non-operating property owned by the Great Northern, and in a determination of the value of operating property it is necessary to assign a value to the Burlington stock along with other non-operating property. This Exhibit A is a table from which I will develop figures in the exhibits subsequently introduced.

(The document marked "Defendant's Exhibit A" was offered and received in evidence and is included herewith as Defendant's Exhibit A).

In the statement in the foot-note that the 7% bonds are primarily a lien on the Burlington stock, the word primarily probably does not mean anything with reference to the present situation because the 7% bonds are a lien on part of the property of the railway as well as the Burlington
200 stock. I have not been able to find out whether all Great Northern General Mortgage bonds are just as much a lien on the Burlington stock as the 7% bonds are.

I have also prepared Exhibit B which shows the average market value of stocks and bonds for the years 1924 to 1932, also for the five year period ending December 31, 1926, 1927, 1928, 1929, 1930, 1931 and 1932. I have shown both the single year valuations and the five year valuations for a period of years. The data in this table discloses rather violent changes in the single year valuations, particularly in the year 1931 and 1932. There is a decrease of 19% in stock and bond values in 1931 and 35.84% in 1932. The five year valuations show very much less fluctuation from year to year. The table is presented because it furnishes some of the basic data I used in other exhibits and to illustrate the impracticability in using a single year period in making use of stock and bond values on account of the changes in stock and bond values from year to year.

My one year period fluctuations disclose a fluctuation all the way from an increase of 10.94% in one year to a decrease of 35.84% in another year, but the five year averages disclose a fluctuation only between an increase of 4.57% in one

year and a decrease of 10.82% in another year. The drop from 1930 to 1931 in the total stock and bond value is from $571,000,000 to $461,000,000. The next year the drop was from $461,000,000 to $296,000,000.

I have prepared Exhibit C which is a statement of the average price of the capital stock, the dividends paid on the stock and the amount earned per share for the years 1916 to 1932, inclusive. The exhibit also gives a statement of corporate surplus at the end of each year. The record shows that in 1916 the stock of the Great Northern sold at $121.00
a share; it dropped somewhat over a period of years
201 down to a low of $61.50 in 1924. A rise in value then
took place over a period of some years to a high of $108.10 in 1929; 1930 the stock was $82.10; 1931, $45.20 and in 1932 the average quotations were $13.20. Over the seventeen year period covered in this exhibit the stock earned $131.00 a share and paid slightly over $92.00 in dividends. The total dividends declared were $229,876,051.00.

I used the 17-year period because a 6% return over a seventeen year period amounts to approximately $100.00 and in that period 6% stock would pay in dividends slightly more than the par value. I have just used it for an illustration. The earnings per share of stock in this 17-year period was $131.39. The corporate surplus increased from $106,000,000 in 1916 to $165,000,000 in 1929 and has now dropped or had dropped at the end of 1932 to $149,000,000. The book equity of the stockholders in the profit at the end of 1932 is represented by the par value of the capital stock plus the corporate surplus or $397,979,053. The market value of the stock for 1932 was $32,830,915 or 8.25% of the book equity. The exhibit presents a rather conprehensive picture of the record of the Great Northern stock over this seventeen year period and shows the stockholders' equity in the property in the way of surplus at the end of each year.

(The documents marked "Defendant's Exhibit B" and "Defendant's Exhibit C" were offered and received in evidence and are included herewith as Defendant's Exhibit B and Defendant's Exhibit C).

Referring to the state's showing in this exhibit of dividends in 1930 at the rate of $7.50 per share and amounting to $18,000,000, the report to the State Railroad Commission discloses that of this $18,000,000, $6,000,000 were declared the year before but the report to the Tax Department did not disclose that. I have no information that out of the $2.50 de-

clared in 1932, only $1.50 was paid that year and $1.00 of it was paid in 1933.

202 I prepared Defendant's Exhibit D from the annual reports of the Great Northern Railway Company to the State Tax Commission of North Dakota in part and in part from special reports. In this exhibit I have shown the total operating income, operating expenses, net operating revenue, taxes, uncollectible revenues, railway operating income, hire of equipment and joint facility rents, and the final figures show the net railway operating income. The lower half of the table shows non-operating income, gross income, interest deduction and other deductions on funded debt and the net income. The average net railway operating income during the nine year period ending December 31, 1930, was $26,514,792 per annum. This compares with the net operating income of $12,669,420 in 1931 and $1,290,551 in 1932. The table presents or the exhibit gives certain basic figures which are used in other exhibits.

(The document marked "Defendant's Exhibit D" was offered and received in evidence and is included herewith as Defendant's Exhibit D.)

I prepared Defendant's Exhibit E from the annual reports of the Great Northern Railway Company to the State Tax Commissioner and special reports and made the computations myself. The exhibit discloses average net railway operating income for various five year periods, five year period preceding the 1929 assessment and the assessment of the next four years. The average net railway operating income for each five year period is capitalized in the next succeeding column at 6% for each of the five year periods shown and in the last column capitalization of net railway operating income is shown at the rate of five per cent. The lower half of the table shows the amount earned on the total stock and bond value by the railroad and it also includes non-operating earnings. The gross income as shown is the sum of the net railway operating income and non-operating income
203 from the years 1928 to 1932. It shows, for 1932 that the stock and bond value is $296,000,000, gross income $6,386,643 and that on an average the securities sold on a basis of 2.16% return, that is, the company earned 2.16% on the total stock and bond value for the year 1932.

(The document marked "Defendant's Exhibit E" was offered and received in evidence and is included herewith as Defendant's Exhibit E).

I do not mean to say that with a $296,000,000 market value the securities were selling on a yield to the investors of 2.16%, but that the properties of the Great Northern earned 2.16% on the stock and bond value. The yield to the investors was much higher. The gross income is the gross income of the corporation and not of the securities.

I prepared Defendant's Exhibit F. The source of my information was the annual reports of the company to its stockholders as to the information shown in the first schedule on the table. On the second schedule I have shown the information reported in the annual reports of the company to the Tax Commissioner of North Dakota. This table gives a comparative statement of the company's investment in operating and non-operating property. At the end of the years 1926 to 1932, inclusive, non-operating property is listed under the head of stocks, bonds, other securities and other miscellaneous property. The second schedule in the exhibit contains a somewhat different statement relative to investment in operating and non-operating property. Investment in the road and equipment as shown in Schedule one is not correct as it does not include certain wholly owned subsidiary companies operated as a part of the Great Northern system. In schedule two those wholly owned subsidiary companies have been included under the head of road equipment and non-operating capital assets have been decreased accordingly and I also have included under non-operating capital assets in schedule 2 locally assessed real estate that is
204 really carried on the books of the company as operating property. The purpose of the exhibit is to secure the ratio between operating and non-operating assets according to the cost of those assets as they appear on the books of the company and this percentage figure finally arrived at is used as one of two methods in assigning stock and bond values to operating and to non-operating property. The property ratio is given 50% weight and the relative earnings from operating and non-operating property over a period of years is given 50% weight. The two percentages are averaged and a composite percentage is used in assigning to non-operating property its relative proportion of the stock and bond value as reflected by the property ratio and the income or earnings ratio. The exhibit is not intended really to prove anything except to arrive at the relative investment of the company in operating and non-operating property. The ratio shows the relation between non-operating assets and total capital assets and 21.26% is the ratio of non-operating assets to total capital assets.

(The document marked "Defendant's Exhibit F" was offered and received in evidence and is included herewith as Defendant's Exhibit F).

I prepared Exhibit G. The sources of the exhibit were the annual reports of the Great Northern Railway Company to its stockholders. The exhibit presents a somewhat detailed statement of non-operating income received by the Great Northern in the years 1923 to 1932, inclusive. It is intended as an analysis of the sources of non-operating income. It shows that 77.48% of non-operating income was dividend income. Most of the dividend income was from ownership of Burlington stock. In the five-year period ending December 31, 1932, 89% of all dividend income was received from dividend stock and 69% of all non-operating income was received from Burlington stock. It is thus apparent that the task of valuing the non-operat-
205 ing property of the Great Northern is to a large extent concerned with the value of this Burlington stock. Over 97% of this stock is owned by the Great Northern and Northern Pacific Railway companies and the balance is seldom, if ever, quoted on the market. That is for five years.

The Great Northern Railway Company in its presentation in this case has claimed a large value for non-operating property and particularly for Burlington stock. I want to call attention to the fact that the earnings on the stock fell from $29,576,538 in 1929 to $1,502,815 in 1932, or a percentage decrease in earnings amounting to 95%. The exhibit was really intended to bring out to some extent the fact that non-operating income has fallen off along with operating income and I wanted to point out in connection with the exhibit that the bond interest paid on these so-called Burlington bonds in both 1932 and 1933 is $4,919,593 short of the amount paid out on the bonds issued to purchase the stock, and that this valuable asset has turned into a liability in view of the fact that the interest requirements on the bonds are now far in excess of the dividends received on the stock and that this situation has undoubtedly seriously affected the market price of the stock of the Great Northern itself.

(The document marked "Defendant's Exhibit G" was offered and received in evidence and is included herewith as Defendant's Exhibit G).

I have prepared Exhibit H from the annual reports of the Great Northern Railway Company to the North Dakota Tax Commission. This exhibit gives a condensed comparison of operating and non-operating income and total income for the

years 1922 to 1932. The lower half of the table shows average net railway operating income for a seven year period ending December 31, 1928, and it is shown for a similar seven year period ending December 31, 1929, 1930, 1931 and 1932, and the average non-operating income is shown for the
206 same period and the total and the ratio of non-operating income to the total. The percentages as shown in this table are used in apportioning stock and bond values to non-operating property in conjunction with the property ratios shown in a previous exhibit. A seven year period was used rather than a five-year period in securing relative income ratios because an abnormally large income was received in certain recent years from non-operating property at a time when actual earnings of such property were abnormally low. This was true of the Northern Pacific, if I may bring that in, to a much greater extent than it was in the case of the Great Northern, and in preparing exhibits for that case a seven-year period seemed to be the only way to iron out the very greatly fluctuating income from non-operating properties, especially dividends. The operation seemed to be that of milking all subsidiary companies during these last few years and to some extent this was true as to the Great Northern. The seven-year period I might say was used solely for the purpose of securing a percentage relationship between total income and income derived from non-operating property. In the case of the Great Northern there is but little difference between the use of the five and the seven-year period.

I computed the approximate difference that there would be on the five-year basis. It makes a difference of about $1,000,000 in the stock and bond value assigned to North Dakota and that would be about half a million dollars in the composite value assigned to North Dakota.

(The document marked "Defendant's Exhibit H" was offered and received in evidence and is included herewith as Defendant's Exhibit H).

207 I have prepared Exhibit I from the annual reports of the Great Northern Railway Company to the North Dakota Tax Commission. I made the computations myself. This table makes the actual apportionment in conformity with the percentages derived in several previous exhibits. I might say in explanation that all of these exhibits have covered a period of years and that I have tried to develop the

figures necessary to test the validity of the North Dakota assessment of the Great Northern Railway Company for the last five years, that is, for 1929, 1930, 1931, 1932 and 1933, and that is the reason for having so many five year periods shown on these exhibits. In this exhibit the market value of stocks and bonds for the five year period preceding the assessments of 1929 to 1933 is shown. The ratio of non-operating income to total income for the seven year period, the ratio of non-operating assets to total capital assets as of December 31st preceding each assessment year and the composite ratio. An assignment or an apportionment of stock and bond values to non-operating property is then shown and in the final column the stock and bond value is assigned to operating property. This table discloses that by the use of this composite ratio of these two other ratios which I developed in my previous exhibits, the stock and bond value to be assigned to non-operating property in 1933 would be $155,685,389, which compares with the figure given by Mr. Schoettler in Plaintiff's Exhibit 8 of $182,235,816. The two methods of valuation are entirely different. I have attempted to assign to non-operating property its relative share of stock and bond value as measured by relative investment and relative earnings over a period of years. Mr. Schoettler has made a direct valuation by
208 several different methods of that same property. He has used the capitalization method as to some items of property and has used the assessed valuation as to other items of property. So far as I know there are no standard methods of determining value of non-operating property which are in general use. Each state seems to have its own method. The method that I have used was used by the State Tax Commissioner of North Dakota for several years when I was with the Department, but I do not recall the period. My method more closely approximates the true figure than any method of which I know.

As to the system used by Mr. Schoettler, the problem of determining the extent to which stock and bond values are reflected by the value of any particular class of property such as this non-operating property is difficult. In the several years of depression or during the certain period of this recent depression the common stock of quite a number of industrial companies was selling on the market for less than the cash assets in the treasury of the company available over and above all obligations and without taking into consideration the value of any tangible assets of the company. In other words, the cash in the treasury was more than the total market value of the stock, so it is rather difficult to say to what extent non-operating assets are reflected in stock and

bond values. Mr. Schoettler has used the method of direct valaution. There are two or three items there that I would criticize, the first one is the valuation assigned to the Chicago, Burlington & Quincy Railroad Company by capitalization method using a rate of six per cent. The statement of Mr. Schoettler I believe justified that rate because of the fact
that the rate of six per cent is used in valuing the op-
209 erating property of the Great Northern Railway Company by the North Dakota Tax Commission or had been so used. In my opinion, however, the problem is entirely different. A man buying a property, an entire property, would probably be satisfied with a return of six per cent on his investment. If he bought all the bonds of that property he probably would be satisfied with a return of four and a half or five per cent, but if he bought all the stock of the property, where he is taking a greater speculative risk he would demand a larger return and in my opinion seven per cent would be a more correct rate to use in the capitalization of common stock dividends to ascertain value. The item number 5 on Exhibit 8 shows the par value and book value of the Dakota and Great Northern Townsite Company. The par value is $50,000, book value $25,000 and the assessed valuation of the property owned by the company, amounting to $1,723,892 is listed as a proper deduction. It is rather difficult to say to what extent idle land, not producing any income, would be reflected in stock and bond values. While it would seem that the assessed valuation was excessive in comparison with the investment, the real problem is not what is that property worth, it is to what extent is that property reflected in the stock and bond value of the Great Northern sytsem; and to what extent idle and unproductive property can be reflected in stock and bond value is a rather difficult problem to determine. The same criticism would apply to the Somers Lumber Company possibly, I don't know anything about that property, I will pass that up. Item 10 shows the investment of the Great Northern in Spokane, Portland &
Seattle Railway Company stock and bonds. The Great
210 Northern owns half the stock and half the bonds. The assessed valuation of the underlying properties back of the stock and bonds is listed as a proper item of deduction as to the Great Northern one-half interest. Well, now that property has been a very unproductive property as far as being an investment is concerned. It has paid its bond interest very irregularly for a long period of years and I believe never has paid a dividend on the stock and I think if the income from that property for the last five years were capitalized the Great Northern share of that income valuation listed would be around between five and six million dollars using the six

per cent rate of capitalization, in comparison with the $20,000,000 set up on Mr. Schoettler's statement. There were really three different methods used by Mr. Schoettler. The assessed valuation of the property was set up as the value as to part of the property listed and the earnings were capitalized at 6% as to certain properties. It seems to me that a uniform method should have been followed. The third method was an estimated value of one or two items.

On Exhibit I, I have made an apportionment of the stock and bond value to the operating and non-operating property by a composite method giving 50% weight to relative income and 50% weight to relative investment or cost as shown on the books of the company. I have used that consistently as to all of the non-operating property of the railroad which has all been treated as one individual item and valued on that composite basis.

The first column in this exhibit shows the assessment year and the second column shows the average market value of stocks and bonds for the five year period preceding the assessment year. The third column shows the ratio of
211 non-operating to total income for the seven year period. I used a seven year period because of the fact that there were extraordinary dividends received during the last few years and there were non-recurring items of income. There was a special dividend received from the Burlington in 1930 of something in excess of four million dollars, I believe, I have not got the figures, and during the last three years preceding the 1933 assessment a railroad company drained its subsidiary companies of cash resources as to all of the subsidiary companies where those resources were available, and those non-recurring items of income do not reflect the relative earning ability of the two classes of property. This method was adopted largely on account of the Northern Pacific situation, but the same facts that apply in the Northern Pacific case would also apply in part to the Great Northern. There is a large amount of non-recurring income which did not reflect relative earning ability of the two classes of property. So that in the case of the Great Northern, instead of eliminating those non-recurring dividends, I attempted to spread them out over a long period of years. If I had used the five year period, it would make $1,140,000 difference in the stock and bond value assigned to North Dakota and about $571,000 difference as to the composite value.

The fourth column on Exhibit I shows the ratio of non-operating assets to total capital assets as of December 31st preceding each assessment year shown on the Exhibit and

that is according to the relative investment in non-operating assets compared with total operating assets. My fifth column gives the composite ratio of the two percentages shown in the third and fourth columns. The sixth column shows the stock and bond value assigned to non-operating property by the composite ratio found in column five and the seventh column shows the stock and bond value assigned to operating property, found by deducting the stock and bond value as-
212 signed to non-operating property from the total stock and bond value. The purpose of this table in connection with one or two of the previous tables which I have introduced is to arrive at the value of non-operating property the same as Mr. Schoettler has attempted to do in Exhibit 8. By his method the total value of non-operating property in 1933 was one hundred and eighty-two million dollars in round figures and by my method it is one hundred and fifty-five million dollars.

(The document marked "Defendant's Exhibit I" was offered and received in evidence and is included herewith as Defendant's Exhibit I).

I prepared Exhibit J. The sources were the annual reports of the Great Northern Railway Company to the Tax Commissioner and the I. C. C. Statistics of Railways. In explanation of that I might say that the railway reports made to the State Railway Commission and to the State Tax Department for years prior to 1930 were all burned when the State Capitol burned in 1930. The table or the exhibit is presented to show the allocation of system value to North Dakota on the basis of the all track mileage is a reasonably equitable basis of allocation. The exhibit shows that it is a reasonably equitable basis of allocation by comparing traffic density per mile of track on the system and in the State of North Dakota. I will not enumerate the figures but will call attention to the fact that two years of the five year period preceding the 1933 assessment the traffic density per mile of track in North Dakota was higher than the system average. The ratio in 1928 was 101.23 and in 1933 was 105.46. In the other three years the traffic density per mile of track in North Dakota was lower than the system average. For the five year period 1928 to 1932 the traffic density per mile of track in North Dakota was 5.77 lower than the system as a whole. The table
213 discloses that the lowest ratio appeared in 1926 when North Dakota's ratio was 86.33% based on a traffic density comparison.

(The document marked "Defendant's Exhibit J" was offered and received in evidence and is included herewith as Defendant's Exhibit J).

I prepared Exhibit K and made the computations therein from the annual reports of the Great Northern Railway Company to the State Tax Commissioner and to the State Board of Railroad Commissioners of North Dakota and also from annual reports of the company to its stockholders. The exhibit gives a comparison of the results of operation for an average mile of track of the entire system and for an average mile of track in the State of North Dakota for the years 1926 to 1932 and also for the three five-year periods ending December 31, 1930, December 31, 1931, and December 31, 1932. The results of operation are compared on the basis of the average operating revenue per mile of track, the average ton and passenger mileage per mile of track and average car and locomotive mileage per mile of track. The ratio of North Dakota averages to system averages are shown for each period covered and for each index of business performed an average of the three indices is given. The composite ratio shows the relative worth of an average mile of track in North Dakota to an average mile of track of the entire system according to factors which are given general recognition. In two years of the last five-year period the composite ratio for North Dakota was higher than the system averages and was lower in three years of the period. For the five-year period ended December 31, 1932, the ratio of North Dakota averages to system averages per mile of track as to the three indices were 95.90%. The general conclusion which may be drawn from the table is that an average mile of track in North Dakota is only slightly less valuable than an average mile of track for the en-

214 tire system.

(The document marked "Defendant's Exhibit K" was offered and received in evidence and is included herewith as Defendant's Exhibit K).

I prepared the table marked Exhibit L from the reports of the railway company to the State Railroad Commission and Tax Commissioner of North Dakota. The table gives a comparison of net operating revenues for the Great Northern system and for the road in North Dakota for an eight-year period. Under system figures is shown operating revenues, operating expenses, the operating ratio and net revenues. The operating ratio is the ratio of operating expenses to total operating revenues. The final column shows net revenues. For the entire eight-year period as to system figures the exhibit shows that the operating ratio was 67.71%. For

North Dakota the average operating ratio for the eight-year period was 62.44%. I have also shown on this exhibit averages per mile of track operated as to each item. The gross revenues per mile of track operated are higher for the system than for the State of North Dakota, but net revenues per mile of track for the system average $2,816 during the eight-year period and for North Dakota average $3,013 per mile of track during the eight-year period. The factor or rather the net operating revenues has been used as one of the factors of apportionment in some of the exhibits which I have prepared and it would seem that the relative profitableness of the business in a given state was one of the things that might well be taken into consideration by the assessing board, and that is the purpose of this table to show that per mile of track operated the Great Northern system in North Dakota is more valuable than system figures.

215 (The document marked "Defendant's Exhibit L" was offered and received in evidence and is included herewith as Defendant's Exhibit L).

I prepared Exhibit M. As to North Dakota the figures were taken from the reports of the Great Northern to the State Railroad Commission. As to all other states the information was certified to me by some official of the State Railroad Commission or Public Utility Commission in that state and was taken from the annual reports of the company to that state, not exactly, however, in the form shown in this table. The information shown in this table was derived from such certified reports. I did not have the original records available in the preparation of the table.

The fact that the traffic originating per mile of road in North Dakota is less than the traffic originating per mile of road over the balance of the system could probably be drawn from comparisons or from information contained in the annual report of the company to the State Railroad Commission, for the state as compared with the system. This method of assigning valuation to the states upon the basis of the origination of traffic has never been used by tax men as far as I know, and it has never been advocated by any railroad appearing before the State Board of Equalization of North Dakota. But the plaintiff's exhibit gives a comparison of individual states and, of course, that information was not available.

An attempt to allocate value upon the basis of originating traffic assigns import traffic to the state in which the port of entry is located and thus in my opinion upsets the validity of

any comparisons based upon traffic origin. The originating traffic figures do not include any revenue received from
216 connecting lines in any state, merely the traffic originated on the particular road, and certainly the state of Washington should not be credited with originating traffic, which is import traffic and which is actually received from a connecting water carrier. A shipment from New York to Seattle, carried over the Great Northern from St. Paul to Seattle would not be classed as traffic originating on the Great Northern, but under the rules laid down in the I. C. C. report, a shipment from China to St. Paul, carried over the Great Northern from Seattle to St. Paul, would be classed as originating traffic and credited to the State of Washington.

This kind of a comparison fails to give any consideration to whether the haul is high class freight or low class freight or to the length of the haul, consequently it fails to show the relative profitableness of the business originating in any state. Now the Great Northern Railway Company affords an exceptionally good illustration of why an allocation should not be made on such a basis. In the five-year period, 1924 to 1928, 15.7% of the total carload tonnage hauled on the Great Northern system was ore and concentrates and this business accounted for only 13.2% of the total revenue from carload traffic. In 1929 50.7% of the total carload tonnage hauled was ore and concentrates and this tonnage accounted for only 15.4% of the total carload revenue. In the three-year period 1930 to 1932, inclusive, 34.05% of the total tonnage hauled, including less than carload traffic in this case on the Great Northern system was ore and concentrates and this accounted for only 8.08% of all freight revenue. The figures indicate that the actual tonnage originated in any state has but little significance. Taking the figures for the last three years the percentage of total tonnage from ore and concentrates to the total originating traffic was 34.05%, while revenue re-
217 ceived from the traffic amounted to only 8.08% of all freight revenue, consequently giving special significance to the tonnage of the originating traffic without any consideration to how far it is hauled or what the freight charges were or what the revenue amounted to would be absurd.

My table 15, Exhibit M discloses the average tons originated per annum in each state and the average number of tons originated per mile of track in each state and the percentage of the system total value which each state originated during a five-year period ending in 1932. The figures for Minnesota show that Minnesota originated an enormous volume of tonnage, 54.13% of all revenue freight originated on the Great

Northern system during the five-year period ending in 1932 originated in the State of Minnesota and consequently the averages per mile of track in Minnesota are far in excess of what they are in any other state. The figures for Washington show that Washington was much less than the system average. The system average per mile of track amounted to 2,073 tons, while Washington amounted to only 1,712. The originating traffic per mile of track in North Dakota during the five-year period per annum was 854, in South Dakota 536, in Montana 781, Idaho 891, Oregon 815, Wisconsin 718. While in my opinion the volume of traffic, freight traffic originating in any state has but little connection with the value of the railroad in that state, in some states there is a very large amount of connecting road traffic, traffic from connecting roads, and if little or no revenue or little or no tonnage was originated in a state it would not mean that the road in that state has no value as a part of the system.

If the two states of Washington, which originates a large amount of import traffic, and Minnesota, which originates a large amount of low class ore traffic were eliminated from this table, my figures disclose that North Dakota would stand the highest with reference to the remaining states of the system, except Idaho where the trackage is very small.

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(The document marked "Defendant's Exhibit M" was offered and received in evidence and is included herewith as Defendant's Exhibit M).

I made the table marked Exhibit N and made the computations therein. The figures contained in the exhibit were derived from the annual reports of the Great Northern Railway Company to the State Tax Commissioner and from special reports. This exhibit merely gives a comparison of the various apportionment or allocation factors that are used in the exhibits where values are apportioned to North Dakota. Three of the factors of allocation shown on this exhibit reflect the relative business performed in North Dakota as compared with totals for the system. These factors are usually termed or somewhat termed use factors, they are transportation service, traffic units and operating revenues. The next three factors reflect the relative units of property in the state compared with system totals. These factors are trackage operated at the end of the year; the next one is trackage owned and operated and trackage leased and operated at the end of each year preceding the assessment years, and the last item physical property, relative physical property. One of the

factors reflects the relative profitableness of the railroad company's business in the state as compared with the rest of the system. That factor is called net operating revenues.

All of the factors except the trackage factor and the physical property factor are based on five-year averages preceding the assessment year. The trackage factors and the physical property factor are based upon figures as of De-
219 cember 31st preceding the assessment year. The lower part of the table gives various averages applicable to each of the five assessment years, the first set of averages being the average of use factors. Below that is shown the average of trackage operated and the three use factors. The third line shows trackage owned and operated and leased and operated and the three use factors, the four figures being averaged. The fifth line shows the trackage operated, physical property and use factors, the averages shown being an average of five factors, and in the last line there is shown an average of six factors, the trackage operated, physical property, transportation service, traffic units, gross revenues and net revenues. Referring to the percentages applicable to the assessment year 1933 we find that the transportation service factor was 20.04%. That means that North Dakota had 20.04% of the revenue car and locomotive mileage of the entire system during the five preceding years. The traffic units factor is 18.93, which means that North Dakota had 18.93% of the total ton miles, plus passenger miles, on the entire system during the five preceding years. The total operating revenue factor is 18.45%; trackage operated at the end of the year 19.96; trackage owned and operated and trackage leased and operated 21.83; net operating revenues 20.88, physical property 14.32, the physical property ratio being by far the lowest of all the ratios.

All of the factors that I have used in this exhibit are factors in common use by taxing authorities and railroads in connection with assigning values for tax purposes, except the factor which I have termed trackage owned and operated and trackage leased and operated. The Great Northern Railway Company runs its trains over approximately 1033 miles of track which it does not own and does not lease and there was considerable question in my mind whether
220 a trackage factor which included trackage owned by another company and maintained by another company and over which that other company ran its trains was proper to include. I have shown it both ways, all trackage operated and trackage operated, excluding such trackage. I have shown these separately. I have shown all trackage operated

and I have also shown the trackage owned and operated and leased and operated. That is not included in the list where I have six factors. I have used the trackage operated excluding the 1033 miles operated under trackage rights. The only one of the five composite averages which I have made at the bottom, which includes this unusual factor of trackage owned and operated and trackage leased and operated, is the third. By including that factor which excludes tracks neither owned nor leased, I secure a little higher ratio for North Dakota.

I believe that taxing officials and railroad tax men always make composite allocations based upon an average of the results of several of these factors. No single method of allocation is perfect; all methods have their weaknesses and on that account why values are seldom apportioned on the basis of less than three or four or five factors.

I did not include the relative cost of service as a method of apportionment of the system value among the states because I never heard of it. It is not a factor that has ever been used so far as I know; it has never been advocated by railroad companies. On the contrary, the representatives of railroad companies that have appeared before the State Board of Equalization in North Dakota for a long period of years have maintained that operating expenses by states could not be accurately determined and that consequently the net revenue factor should not be used.

I was in the Tax Commissioner's office as Deputy Tax Commissioner until January, 1933. No such factor was
221 ever presented to the State Board of Equalization or Tax Commissioner by any railroad during my period of service. I have read the briefs and tables submitted by the Great Northern Railway Company to the Tax Commissioner for use in arriving at the assessment for the year 1933 and no such factor or contention was included therein.

(The document marked "Defendant's Exhibit N" was offered and received in evidence and is included herewith as Defendant's Exhibit N).

I prepared the table marked Defendant's Exhibit O from the records of the State Board of Equalization. The table shows the assessed value of the Great Northern Railway Company in North Dakota for the years 1915 to 1933, inclusive. The table has some special significance as it shows the value found by the United States District Court for the years 1917 and 1918 and a record of assessments after such adjudication. The United States District Court in the 1917

tax case found that the basis of assessment of non-railway property was 25% of full value and the court adjusted railway assessments for 1917 to such basis. Prior to 1919 assessments in North Dakota were not made on a full value basis. For some years prior to 1917 it was estimated that assessments were approximately 25% of full value. Under the classification law of 1918 the property was divided into three classes, land, town and city lots, bank stock, railroad property and some other classes of property were required to be assessed at 30% of full value. In equalizing assessments for the year 1918, the property in class one when changing from a 25% tax basis to a 30% tax basis, the State Board of Equalization increased the value of property in class one by ten per cent. Class I was land, town and city lots, bank stock, railroad property and some other classes of property. The United States District Court took judicial notice of this fact and in adjusting railroad values in
222 1918 railroad assessments were increased ten per cent over the value found by the Court for the year 1917. This actually resulted in all property in class one being assessed at 27½% of full value. On a full value basis the Great Northern valuation for tax purposes in 1918 was $98,494,772, the same as it was in 1917, but that statement is based upon the fact that it is assessed at 27½% of full value and not 30%. Since 1919 the law has required the assessment of railway property at full value and since 1923 the statutes have required the assessment of all taxable property at full value.

The assessments which I have shown for the first two years 1915 and 1916 were estimated at 25% of full value and for 1917 and that is in accordance with the finding of the court, so that in order to arrive at the 100% full value, I have multiplied those figures by four and produced the full valued basis in the fifth column. For 1918 I have increased the 30% assessment fixed by the court to a full valued basis by multiplying it 3-1/3 times. The remaining figures are the actual assessments. During the period since 1918 the Great Northern had several very substantial reductions in valuation. There was a four per cent reduction in 1919 compared with the full value basis of 1918. This reduction amounted to $3,683,000. In 1921 there was a five per cent reduction in the valuation, which reduction amounted to $4,332,252. There was practically no change in the assessment from 1921 to 1929, when there was an increase of one and one-fourth per cent, amounting to $1,028,291. The assessment stood at approximately the same figure in 1930. In 1931 there was a reduction of $294,691. In 1932, there was a reduction in the

assessed valuation of $4,149,973, a percentage reduction of five per cent. The assessment in 1933 was slightly less than in 1932. Comparing the assessment years 1917 to
223 1933 and using the full value figure for the 1917 assessment, we find that there was a reduction of $19,661,884, a percentage reduction of 19.96%. Comparing 1919 and 1933, there was a reduction of $7,770,442, or a percentage reduction of 8.97%.

(The document marked "Defendant's Exhibit O" was offered and received in evidence and is included herewith as Defendant's Exhibit O).

Exhibit P shows the system value of the Great Northern as reflected by the stock and bonds, market value of stocks and bonds for a five year period preceding each assessment year, system value as reflected by net railway operating income for a five year period preceding each assessment year capitalized at the rate of 6%; also system value as reflected by an average of these two methods. The table shows an apportionment of stock and bond value, value derived by capitalization and an apportionment of the composite value to the State of North Dakota by five different methods.

The figures in my first three columns in Exhibit P are all derived from previous exhibits, and having arrived at the system value for each of these periods, I proceed to apportion the system value according to the factors which I have discussed in previous exhibits. Schedule number 1 shows an apportionment of system values to North Dakota on the basis of transportation service, traffic units and gross operating revenues averaged. The average of the three percentages is found and the apportionment is made on the basis of a composite percentage. This schedule uses just the three use factors, and the schedule shows values applicable to the assessment years 1929, 1930, 1931, 1932 and 1933. The five years were covered in order to show whether or not the assessment of the State Board of Equalization was an accurate and equitable assessment in the years preceding 1933.

Following the percentage figure is shown stock and
224 bond value apportioned to North Dakota, the capitalized value apportioned to North Dakota and the composite value apportioned to North Dakota. I am commencing on column 6 now. The actual assessment for each of the five years is then shown. In the last three columns there is shown the ratio of the assessment to the values assigned by each of these three methods. First, the percentage of the assessment to stock and bond value, the percentage of the assessment to capitalized value and the percentage of the as-

sessment to composite value. The valuation found by this method for 1929, or the composite value found by this method for 1929, shows that the Great Northern was assessed 101.06% of full value; the next three years show an under assessment compared with the composite value assigned. In 1930 there was an under assessment of 3.89%; in 1931 there was an under assessment of 3.41% and in 1932 there was an under assessment of a very small percentage. I was reversing that. The figures on the table show the percentage of the assessment to the assigned value. I was quoting the under assessment. For 1933 the exhibit shows that there was an over-assessment of 19.32% by this method. The schedule 2 of this exhibit shows an apportionment to North Dakota on the basis of mileage of tracks operated and the three use factors, the four factors being averaged. The figures shown in the first four columns are the same as in the preceding schedule. The final results shown by this method in the last column show an under assessment in each of the four years preceding 1933 and an over assessment in 1933 of 18.05%. The third schedule, by the way, the stock and bond value, capitalized value and the composite value in each of these five schedules are the same as to the system figures. The third schedule shows an apportionment to North Dakota on the basis of mileage of all tracks owned
and operated and leased and operated and the three
225 use factors, the composite percentage shown in the
fifth column as being an average of the four factors. The final results show that the assessment for each of the four years preceding 1933 was less than the composite value assigned by this method. In 1932 the assessment was only 92.57% of the composite assigned value.

I read the figure for 1931 instead of 1932. The 1931 assessment was 92.57%. The over-assessment for 1933 amounted to 115.27%. In Schedule 4 an apportionment is shown to North Dakota on the basis of trackage operated, physical property and the three use factors, the three use factors being transportation service, traffic units and gross revenues. This schedule shows somewhat different results. An over-assessment in 1929, a slight under-assessment in 1930, the assessment in 1931 was 100.41% of the composite assigned value; in 1932 the assessment was 104.29% of the assigned value and in 1933 124.52% of the assigned value. The fifth schedule shows an apportionment on the basis of six factors, the six factors being averaged to find a composite percentage; the factors used were trackage operated, physical property, transportation service, traffic units, gross revenues and net revenues. The final column shows that the

assessment in 1929 was 101.29% of the composite assigned value; in 1930 96.25%; in 1931 97.33%, in 1932 101.40% and in 1933 121.72%. The exhibit shows that by most any combination of factors you might use that there was no appreciable over-assessment of the Great Northern Railway Company property in North Dakota during the years 1929 to 1932 and that a considerable under-assessment is shown by some of the methods. In this exhibit I have gathered together all of the common methods of allocating railroad values and one that probably is not common (tracks owned and operated and leased and operated). The exhibit
226 tends to show that by most any method of apportionment the valuation of the Great Northern Railway Company property in North Dakota for the years preceding 1933 was very well justified. I might say in that connection that expert appraisers frequently differ as much as 20% in valuing small property and that there is no method of valuation that will produce exact results whether it is a railroad or an appraisal of a house or any other piece of property. When I say that one of these schedules shows an over-assessment, I do not mean to say that the schedules used in this table or any combination thereof represent an exact mathematical statement of the true value of the property. Any method of valuing a railroad is merely evidence of value. The State Board of Equalization in North Dakota in deliberating on railroad assessments considered the evidences of value as presented in the briefs of the railroad companies and the evidences of value as shown in exhibits prepared by the Tax Department for their use and just what their final conclusions as to the assessments were, were, I believe, based upon their judgment in part and in part upon what the statistical data that they considered indicated.

(The document marked "Defendant's Exhibit P" was offered and received in evidence and is included herewith as Defendant's Exhibit P).

I prepared Exhibit Q which is the same as Exhibit P with the exception that I have capitalized earnings at 5% instead of 6%. The purpose in part of this exhibit is to disclose the difference which would be accomplished by the use of the different percentage of capitalization, and in part it is my opinion that the capitalization of net railway operating income at six percent in 1933 probably would not take into consideration the condition of all other properties in the state.
To pick out one particular property, class of property,
227 and capitalize their earnings and give them special consideration on the basis of earnings and forget about

the earnings of all other classes of property, what other property owners are receiving on their investment and you have given a favorable consideration to the class that is set aside where value is determined solely on the basis of earnings. I mean that it would constitute a special privilege. It was my opinion that on account of the extraordinary conditions existing in this state and in the Northwest in 1933 that 5% would have been a fair rate to use in the year 1933. I have set up the four preceding years just for purposes of comparison. The final result of the methods used in Exhibit Q show an under assessment for each year prior to 1933 according to each of the five methods of allocation. I don't want to be in a position, however, of arguing that a 5% rate is normally a fair rate of capitalization; I only think that in view of the extraordinary conditions existing in 1933 that some consideration should be given to other property owners in the state.

In that connection, I have prepared other exhibits disclosing the situation to which I refer.

(The document marked "Defendant's Exhibit Q" was offered and received in evidence and is included herewith as Defendant's Exhibit Q).

I prepared Exhibit R from the annual reports of the Great Northern Railway Company to the Tax Commissioner. This exhibit is headed the C. F. Balch method. Mr. C. F. Balch is a railroad man, statistician and expert, for the Chicago & Northwestern Railway Company. This method as set out in this exhibit has been used by Mr. Balch for a number
228 of years and quite a few cases in Federal Courts have been decided on the basis of the method that he has promulgated.

The system value is found exactly as we have set it forth in previous exhibits. Mr. Balch uses the five year average stock and bond value and the capitalization of net railway operating income at 6%, and that is what I have done in this case. I would then find the composite system value and this composite system value divided by the number of miles of track on the entire railroad system to find the average value of a mile of track. Then in order to assign values to North Dakota under this method it is necessary to find the relative worth of a mile of track in North Dakota as compared with a mile of track on the entire system, and this method measures the relative worth of a mile of track in a particular State by a comparison of operating revenues, traffic units and use of rolling stock, car and locomotive mileage for the sys-

tem and for the State. In this exhibit I find that in the five year period ending December 31, 1930, operating revenues per mile of track were 91.31% of system average; traffic units were 91.29% of system average; car and locomotive mileage 97.72% of system average. The method then involves what you might term an equation. The miles of track of the entire system were worth collectively per mile—38,187 miles of track in North Dakota collectively were worth on the basis of operating revenues 91.31% of system value or $34,869 per mile; on the basis of relative traffic units North Dakota trackage was worth 91.29% of system average or $34,861 per mile; on the basis of relative use of rolling stock per mile of track North Dakota trackage was worth 97.72% of system average or $37,316. These three values are then added and divided by three to find the value of a mile of track.

229 As represented by these three averages a mile of track in North Dakota is found to be worth $35,682. This is then multiplied by the miles of trackage in the state to find the total value of the property in the state, which amounts to $85,927,608, as compared with an assessment that year of $82,999,997. This exhibit shows an under assessment that year of 3.41%, the assessment being only 96.59% of the assigned value. This exhibit deals with the assessment for the year 1931.

(The document marked "Defendant's Exhibit R" was offered and received in evidence and is included herewith as Defendant's Exhibit R).

Exhibits S and T show the computations of the railroad assessment on the basis of the Balch method, which I have just described for the years 1932 and 1933. Exhibit R covered the year 1931 and these two exhibits cover the years 1932 and 1933 in exactly the same manner. The values assigned to North Dakota for 1932 by the Balch method is $78,892,878 as compared with an assessment of $78,850,024. In other words, the assessment was 99.95% of the assigned value. For the year 1933 the aggregate value of the Great Northern Railway in North Dakota as reflected by the Balch method was $66,075,109 as compared with an assessment of $78,832,888, the assessment being 119.31% of the value assigned by this method.

(The documents marked "Defendant's Exhibit S" and "Defendant's Exhibit T" were offered and received in evidence and are included herewith as Defendant's Exhibit S and Defendant's Exhibit T).

Each one of these is on a five year average.

I have prepared the table marked Exhibit U.

230 Mr. Dorety: If it please the court I would like to object to the introduction of any testimony regarding this exhibit or to the introduction of the exhibit itself on the ground that the information that it contains is immaterial to any issue in this case. The exhibit appears to be a comparison of assessed value of farm real and personal property with farm income, and my first ground of objection is that the rate of assessment of farm property is not in issue in this case. The complaint alleges and the answer admits that it was the duty of the assessing authorities to assess other property at its fair value and even in the absence of an issue to that effect, it is to be presumed that they have done so unless the fact is brought in issue in some way, which has not been done in this case, so I submit that while the witness has made remarks from time to time about what has been done in the case of farm property, I think all that testimony is inadmissible and immaterial in this case. I think that this sort of an exhibit is particularly susceptible to objection because it is not a comparison of farm assessment with farm value, but it is a comparison of farm assessment with farm gross income. No one has ever claimed that the value of property can be determined from its gross income. Some lines of business and in some classes of property the gross income may be the same as the net, take bonds. In other classes of property the expenses may eat up 90% of the gross income, so that the net, which is really the thing that determines value, would be only 10% of the gross. You might put in an exhibit like this comparing Government bonds instead of farm property and you would find a very different ratio there between assessment and gross income. There the gross income would really be a measure of value because it is the same as net; but take a railroad property where

231 ninety cents on every dollar or more may be expended in operations and a comparison would distort the facts by a thousand per cent, and it seems to me that if such a comparison as this were to have any value at all we would have to go into the investigation of what the net income from farm property is as compared with net railway income and to determine that would take months of hearings as to what the net income from farm property is, so that I object to this line of testimony on the two grounds, that the propriety of farm assessment is not in issue, and on the second ground that if it were that the ratio of assessment to gross income has no

bearing whatever and cannot aid the court and it is utterly immaterial.

The Court: I have not read your bill but I rather understand from what you say that your bill does not allege any disparity or arbitrariness on the part of the Board because of the different assessment of farm property in a different ratio to railroad property.

Mr. Dorety: No.

The Court: You do not make that an issue.

Mr. Dorety: No, we are not alleging discrimination in this case as is sometimes done in railroad tax cases where it is alleged that a farm property is under assessed. We assume that all property is properly assessed except our own.

The Court: I will hear from you Mr. Shaft.

Mr. Shaft: If it is counsel's contention that it is immaterial that other property in the state has been overassessed in the same percentages or greater percentages than the railroad has, then it would seem to me that his contention is entirely without merit in this action where we are in a Federal Court which has jurisdiction over this action only because equity will take jurisdiction in case of a discrimination. Discrimination is a necessary element in their case.

232 If all property is assessed at 150%, how is the railroad property discriminated against if it is assessed at 150%. The second proposition is simply this, that this table we do not contend to have any binding force, we offer it simply for the purpose of showing the general trend of farm income compared with railroad income for the purpose of showing that the Board of Equalization in assessing railroad property, which is frequently and usually assessed upon the basis of arbitrary formulas, was justified in making an assessment considerably in excess of the results produced by these arbitrary formulas, because of the fact that all property in these times is suffering from a lack of earning power, from a shortage of gross income, from a depression which justifies the Board of Equalization in taking those things into consideration and in refusing to adopt or accept the specific figures produced by these arbitrary formulas.

The Court: The impression I got was this, that your offer of this exhibit was for the purpose of bringing to the attention of the court that the farm property assessment in 1933 was over-assessed in comparison with the plaintiff in this case; therefore, there could be no discrimination.

Mr. Shaft: I do not believe that we could claim that much for the exhibit because I do not believe that the relationship between gross income and actual value of the property is that closely connected so that we could make that claim for the exhibit.

The Court: Then what is the purpose of the offer?

Mr. Shaft: We offer it for the purpose of showing the utter unfairness of applying these arbitrary formulas strictly in the case of the railroad and giving no consideration to gross income or things of a similar nature with reference to farm property.

The Court: The court will reserve a ruling on this at this time. I want to look at the exhibit a little more and consider it. I want both parties to get in all the record they desire to have within reason, that they may in
233 good faith think it pertinent to the issues involved, although the court may not give a great deal of consideration to some of it in deciding the case. I will reserve a ruling at this time.

(Whereupon the witness proceeded as follows):

I would say that the exhibit shows a loss to farm income over a period of years, both gross and cash income and tends in a general way to prove a very large loss in farm values. The exhibit does not prove anything conclusively but it gives a general picture of the economic situation that existed in North Dakota at the time that the State Board made its assessment in 1933. The Board was confronted with a tremendous deflation in farm values and that deflation is exhibited or portrayed in this exhibit and other exhibits in a general way. This exhibit indicates that there may be a disparity between railroad and farm property taxation. This table show a much larger percentage loss in farm income than in railroad income both as to gross income and cash income.

Mr. Dorety: It may be understood that all this testimony is objected to, Your Honor?

The Court: Yes.

I will call attention to some of the percentages. During the five-year period, 1924 to 1928, the assessment of farm property averaged 353% of gross income and 386% of cash income. During the four-year period, 1929 to 1932, the assessment of farm property averaged 822%of gross income and 944% of cash income. In the year 1931 the assessment of

farm property was 1047% of gross income and 1277% of cash income. In 1932, the assessment of farm was 1045% of gross income and 1230% of cash income. During the five year period from 1924 to 1928 the exhibit shows that the assessment of the Great Northern property averaged 380% of gross in-
234 come, and during the four-year period, 1929 to 1932, the assessment for the Great Northern averaged 501% of gross income. This compares with 822% as to farm assessments. In a general way the table indicates that the Great Northern Railway property has received more favorable treatment than farm property in the assessments. The drop in gross income from farm production from three hundred million in 1924 to seventy-one million in 1932 roughly indicates the drop in value of that property. The assessment, however, was reduced only a small percentage as compared with the drop in income.

Mr. Shaft: We offer in evidence Exhibit U for the purpose of presenting a picture of the economic background with which the State Board of Equalization was confronted at the time of making the 1933 assessment.

Mr. Dorety: And I object to it, if it please the court, on the ground that such information as this does not even have a remote bearing on the economic background. You might as well count the number of dandelions on the farm per year and say that that has some relation to it; you cannot get the remotest idea of what farm property was worth from its gross income, it is an utterly irrelevant factor and it can only be made relevant by guessing about how much of the gross is net. If it is material at all it must invite an issue in the case as to what farm expenses are and how much is loss, and, therefore, what the farm value is, and that would be an issue which is not pleaded and would take us a month to try out.

The Court: I am inclined to think at this time that the exhibit does offer an issue in the case that the plaintiff would be entitled, if you should so desire, or if it desired to dis-
prove the suggestion that the gross receipts and cash
235 had a tendency to prove the net, but I want to think about it a little more and I will just reserve a ruling on it until the evidence is in here; I am just suggesting at the present time I do think it tenders a new issue here. I will consider it a little further and reserve my ruling.

(Whereupon the witness proceeded as follows):

In connection with this exhibit the terms gross income and cash income are not defined. Gross income and cash income

is defined in the bulletins of the United States Department of Agriculture and are given as follows: "Gross income relates to cash income, plus the value of the products consumed in the farm household on the farm where the commodities were produced. Cash income relates to the value of quantities actually sold off the farms of the state where these were produced". The gross income and cash income of crops are credited to the year in which the commodities were produced, evaluated at prices received during the marketing season for the particular crop. Gross income and cash income from live stock production are computed on a calendar year basis, evaluated at average prices for the calendar year. This exhibit does not tend to show value but merely measures the loss in value as indicated by loss in gross income.

Mr. Shaft: Now, if Your Honor please, we have four or five more exhibits of the same general tenor, giving the picture in a little more detail and a little different methods of comparison. We proposed to offer them and we have no objection to their being all offered subject to the objection of Mr. Dorety, and in order that the record may be saved we will stipulate at the outset that all of the testimony and all of the offers with respect to these several tables on farm income may be offered subject to Mr. Dorety's ob-
236 jection and may be received subject to the reserved ruling of the court and that will save a little time and record.

The Court: All right.

Mr. Shaft: That is Exhibits U to Z, inclusive, it will be and that objection and stipulation will stand to Exhibit Z-1 as well.

The Court: Very well.

(Whereupon the witness proceeded as follows):

The information in Exhibit V that is my table No. 30, was secured from the same sources as the last exhibit. The general purpose of the exhibit is about the same as the last one, to show the decline in farm gross and cash income in more detail than was shown in the last exhibit, and to give a comparison of railroad assessments and farm assessments in somewhat more detail from a somewhat different point of view. This table contains a number of index figures, the index numbers used in the exhibit show the relation of all figures to figures for 1924 and the 1924 figures are used as the basic figures to measure the rise or decline in income and

in assessments. Referring to the index figures shown opposite gross farm income we find that the decline in farm income was somewhat irregular up to 1928 when farm income stood at 83% of the 1924 figure. I am referring to gross income. In 1929 the index figure was 71, in 1930 the index figure stood at 49; in 1931 it stood at 24 and at 24 in 1932. Comparing these figures by gross revenues of all railroads of the state we find the gross revenues increased from 1924 to 1928, when the index figure from all gross revenues of railroads in North Dakota stood at 120 as compared with the base year 1924. In 1929 the index figure was 110; in 1930, 91; in 1931, 66; in 1932, 51. The final column in the first schedule of the exhibit shows the relation
237 between gross income from farm production and gross income and gross revenues of railways. In 1924 railroad gross revenues were approximately 15% of the farm gross. In 1931 railroad gross in North Dakota was 42% of farm gross and in 1932 33% of farm gross.

The next schedule presents the same picture with reference to cash income from farm production. Cash income fell from 100% in 1924 to 22% in 1932. In 1931 railroad gross revenues in the state amounted to 51% of cash income from farm production, 39% in 1932, and the final schedule on the table gives index figures relating to the assessment of farm property and railroad property. In spite of the continuous drop in farm production the assessment of farm property stood at 98% or 97% of the 1924 figure up until 1930. In 1931 it dropped to 81% of the 1924 figure, 80% in 1932 and 72% in 1933. The index figures for railroad assessments stood at about 97% for quite a number of years in the period from 1924 until 1930, it dropped to 94% in 1931, 86% in 1932 and the same in 1933. The final column in this schedule shows that the assessment of railroad property for seven years, 1924 to 1930, stood at about twenty-one and a fraction per cent of the assessment of farm property. In 1931 the percentage rose to 24.72% and it has developed for the [—] 1932 it stood at 23.03% and in 1933 25.37%, but for seven years out of this period the variation was constant in the assessment of the two classes of property in spite of the fact that the farm income dropped a very much greater percentage than the income of railroads in the state.

Referring to Exhibit W, the important figures in this table are the percentages derived, and the ratio of 1931 gross farm income to the five year average 1924 to 1928 was 27.91%, cash income in 1931 was 25.07% of the 1924-1928

average. Railroad income for 1931 was 64% of the
238 1924-1928 average. In 1932 farm income, gross income, was 27.39% of the 1924-1928 average, cash income 25.60% and railroad income 48.55% of the 1924-1928 average. Comparing the four-year period, 1929 to 1932, with the previous five-year period on the basis of average annual income, we find that farm income was 38% of the 1924-1928 average, farm gross income; cash income was 36.93%, while railroad income was 75.81% of the 1924-1928 average.

Exhibit X gives a statement of the taxable value of all property and of farm property for the years 1917 to 1933 and shows the ratio of farm property taxable value to the total taxable value of all property for the years 1917 to 1933. The ratio of the farm assessment to total assessment increased decidedly in 1919 as compared with the previous year. When changing from a 30% tax base in 1918 to 100% taxable value in 1919 railroad property was raised 233% while farm lands were raised 384%. Both classes of property were required to be assessed at 30% of full value in 1918 and at 100% of full value in 1919, but in changing from a 30% tax base to a 100% tax base farm lands were raised 151% more than railroad property was and that equation of that year was ironed out to some extent in the next few succeeding years and the ratio of farm property to total properties stood around 69% approximately for some years prior to 1929 and it has now dropped to 64.66% of the total assessment, the drop being in the last three years. The figures shown in this table are presented largely because of the fact that I have made an estimate of the tax burden on farm property for a period of years, which is presented in another exhibit.

Exhibit Y shows the average tax rate on all property subject to the general property taxes for the years 1920 to 1933 and is shown because it is used in Exhibit Z.

Exhibit Z purports to be an estimated property tax burden
239 on farm lands and farm personalty. I made the estimate. The exhibit shows taxable value of farm property, including both farm lands and farm personalty. The second column in the exhibit shows the average tax rate on all property and the third column shows the estimated tax rate on farm property. While the tax rate on farm property is somewhat lower than the average tax rate in the state, in this third column I have estimated that the tax rate on farm property is 87% of the state average. This estimate was based upon a detailed and exhaustive analysis of

tax reports in the various counties of the state made in, I believe, three different years in which the same average figure was developed. That work was done at the time I was in the office of the State Tax Commissioner. A detailed record of that was lost when the Capital burned, but that estimate is what I believe to be an accurate estimate of the tax burden on farm property. The school poll taxes, motor vehicle license taxes and gasoline taxes have not been included; state and federal income taxes have not been included. The tax burden on farm owners and operators in this table is measured by taxes imposed on property used in the business of farming and on farm household goods, clothing and other personal property. I have not attempted to make any estimate of the gasoline taxes paid by the farmer or other special taxes, merely the general tax burden on farm property.

Exhibit Z-1 gives a comparison of general property taxes on farm property with gross income and cash income from agricultural and live stock production, and also gives a similar comparison of taxes with gross income for the Great Northern Railroad. The comparison covers the years 1924 to 1932, inclusive. The first schedule shows that in 1924
farm taxes were about 6% of gross income. In 1929
240 they had risen to a little over 8%. In 1930 farm
taxes were 12% of gross income; in 1931, 21.75% and in 1932, 18.20%. The final column in that schedule gives the index figures for farm income as compared with 1924. In the second column the comparison of taxes on farm property with cash income shows that in 1924 farm taxes was 6.46% of cash income; in 1929 taxes had mounted to 9.26%; in 1930 the rate was 13.89%; in 1931, 26.53% and in 1932, 21.42%. The final schedule on the exhibit gives a comparison of Great Northern Railway taxes, that is taxes levied on operating property, with gross operating revenues and shows that while taxes were 8.85% of gross in 1924, had fallen to 6.84% in 1928, were 7.75% in 1929, 1930 the ratio of taxes to gross operating revenues was 9.62%, in 1931, 13.18% and in 1932, 13.76% and in 1933, 12.82%. Comparing the Great Northern taxes with farm taxes in relation to cash income of the farmer, we find that in 1930 when the farmer was paying 26% of his cash income for taxes the Great Northern was paying about half that. In 1932, when the farmer was paying 21% of his cash income for taxes the Great Northern was paying between twelve and thirteen per cent. While this exhibit does not tend to prove what the value of the Great Northern Railway property in North Dakota may be, it does show the enormous tax burden on the

principal other item of taxable property in North Dakota; it shows an enormous increase in the burden of taxes in relation to the farmer's income. I might say that there are a number of other estimates have been made on the relationship of farm taxes to farm income and that these figures are decidedly conservative as compared with certain estimates gotten out by the Agricultural College experts.

(Whereupon Exhibits V, W, X, Y, Z and Z-1 were offered in evidence subject to plaintiff's objection, and the witness testified as follows upon examination by Mr. Dorety).

241 The gross income from farm production figures and the cash income also are offered not to show value of farm property but changes in value. I did not contend that because Exhibit U shows $211,000,000 gross income in 1929 and $71,000,000 in 1932, that therefore farm values in 1932 were 1/3 of 1929. I think in measuring the loss in value of any class of property you must take into consideration average income for a period of years, I would not say that one year determined—

Taking the 1924 to 1928 period, $260,000,000 and the following five years $100,000,000, it would be my opinion that that indicated a decrease between those two periods.

In the case of railroad property, I would say that the best measure of change in value is change in net revenue rather than in change of gross revenue. Taking a change in net on the railroads from an average five-year period ending in 1929 as compared with 1932, I would not say this would show a reduction of value to 1/30 because in measuring loss of value on the basis of income, I do not think a single year has any significance. You must take a period of years. If you take a period of five years ending in 1934 with an average of around $10,000,000 and the 1929 five-year period around $30,000,000, that would show a loss of railroad value down to 1/3, to the extent that relative income indicates loss in value, and yet the gross revenue on railroads only shows 1/2 loss.

It is true that in an exhibit like Exhibit U, where the lower part of it considers railroad figures, if instead of using the gross total operating revenues, I had used net revenue figures, I would show in the last column, instead of a change from 424% to 751%, which is less than double, I would
242 show a change of probably 1000% difference in those percentages, and I think if you had compared figures for net farm income you would have to signify the change by infinite because net farm income no longer exists, it has been

wiped out. There is no way to consider the net income of the farmer except by approximation without doing a vast amount of research work, which would take many months, and that probably would not be accurate when you had it, but we know in a rough way that $72,000,000 gross don't cover the cost of farming operations.

In my farm value figures on these exhibits, there is nothing for value of farm improvements because they are not assessed at all and have not been since 1918 or 1919, so that to the extent that the farmer's improvements escape taxation, he is at least given some privilege that the railroads do not have. That is also true of seed, which is exempt in the hands of the farmer.

Mr. Dorety: I just want to submit those replies for your Honor's consideration as tending to support my contention that these gross revenue comparisons have no value whatever to the extent that if they are given any weight they are found to be misleading, they could not lead to an accurate result.

(Whereupon the witness on further examination by Mr. Shaft testified as follows:)

In my testimony, I have not meant to indicate that any computations which I made or which others made were the computations of the State Board of Equalization.

Referring to the compromise settlement of an action brought by the Soo Line railroad in connection with its 1933 assessment, I was employed by the state in connection with that action and prepared the figures upon which that settlement was based. The basis of the settlement of the suit brought by the Soo Railway Company involving their
243 1933 taxes was parity in their assessment as compared with the Great Northern Railway property. We determined the relationship between the actual value and the assessed value of the Soo and of the Great Northern and the Soo was brought down to a parity with the Great Northern under the terms of that settlement. Referring to Mr. Turnburke's method of apportionment of system value among the states upon a basis of cost of service, in the first place Mr. Turnburke has attempted to test the accuracy and validity of the 1933 assessment of the Great Northern on a basis of a method of apportioning railroad values that never has been used and that never has been advocated by the Great Northern and that has never received any recognition in court. The theory in my opinion is based upon fundamentally wrong principles as well as upon false premises. In the first place

it assumes an idealistic rate structure, in which all rates are based upon cost of service, including a percentage return upon the cost of the property. It assumes that that rate of return is uniform in every state. In other words, it assumes an impossible situation. With hundreds of freight rates being considered at all times by the Interstate Commerce Commission it is quite apparent that the rate structure is not idealistic. The method evolved by Mr. Turnburke gives no weight to the character of the traffic in any state, whether the traffic is high grade or low grade traffic, and secondly no weight is given to the revenues received from the traffic within the state. It is a denial of all facts relative to the geographical area in which the traffic is carried on. It throws all interstate revenues into one single jackpot and then apportions them over the entire system and over every state on the system on the basis of cost of operation. It is based partly upon the theory that
244 rates are everywhere adjusted to costs of service, whereas rates are largely fixed on a competitive basis, the rates on all commodities are not the same, rates are fixed according to the value of the commodity carried to a greater extent than they are on the cost of service. Another objection is that I think that it is apparent that the method assigns to Washington and certain other Western States revenue from traffic that don't ever go into those states, it never gets out of the North Dakota-Minnesota territory; it is all thrown into one jackpot and parceled out on a cost plus basis.

The formulas that I have used in this case to a great extent are the ordinary and usual formulae that have been given recognition either by the courts or are in general use by taxing bodies, and the State Board of Equalization gave such weight to the data as the Tax Commissioner presented to the Board as in their judgment it was entitled to. I cannot give any testimony as to just what weight was given to the evidence presented to them. There was two classes of evidence, that presented by the Tax Commissioner and that presented by the Railway Company.

These formulas which I have presented together with the various combinations of factors were at various times presented to the Board of Equalization by the Tax Commissioner, and the railroads did the same sort of thing. I never heard of the railroads making the contention that railroad property should be allocated among the states on the basis of cost of service. On the contrary the various railroad tax commissioners and representatives that appeared before the State Board of Equalization of North Dakota over a long period of years stated, I think each and every one of them

from time to time, that the net earnings method of allocating railroad values was totally inaccurate because of the fact that gross operating expenses by states could not be accurately determined.

245 Cross-Examination.

By Mr. Dorety:

The taxing authorities of North Dakota to some extent have free access to reports and records on file with the Railroad Commission. There is ordinarily no limit on that except when they are in use.

Exhibit P is really the culmination of all my previous exhibits. The previous exhibits are for the purpose of producing figures to be used here or else for the purpose of justifying the methods that I used here. I believe it is correct that schedule 4 on Exhibit P showing the five factor ratio is the one which is advocated by the state as the fairest basis of allocation. That shows the 1933 assessment to be 24½% in excess of my computed value by the composite method in Schedule 4.

If in the first column instead of using five year stock and bond figures, I had used one year or three or even four years or anything less than five years, I would obtain a smaller valuation in North Dakota and show a greater over-assessment. And if in column 2 I had used anything less than five years, I would also show a lower valuation of the railroad. It is also true that if I had allocated my stock and bond value as to operating and non-operating properties in proportion to income produced alone, that would have decreased the North Dakota value and increased the over-assessment. In using the two factors to make that apportionment, I was influenced by the fact that you were comparing unlike income. Using investment there increases the Great Northern's North Dakota value and decreases the over-assessment.

Also, according to the figures presented by the plaintiff, if in the fourth column I had prorated interstate revenues in proportion to the cost of service as Mr. Turnburke did, I believe that would have decreased the North Dakota value and increased the over-assessment.

I have been working on these exhibits off and on for several months. I think I started working on the Great
246 Northern exhibits in May and have been devoting a large proportion of my time to it for several months. The only other method that I tried in addition to the computations that have been offered in evidence here was the so-

called Haugen method. In all that time I was not able to find any method of computation that would produce a value to North Dakota equal to the assessment for 1933 by any usually accepted method.

Referring to the matter of using five year stock and bond figures, instead of a shorter period, if we were just trying to determine the actual price that property would sell for, I would give controlling weight to current sales if there were any. If land were selling today for $100 an acre and if there were plenty of sales at that price, I would not go back five or ten years when it was selling for $50 an acre and average those prices. You never follow a boom all the way up in appraising land for tax purposes or other purposes. I would be willing to agree that under ordinary normal market conditions and for anything except the purpose of a tax case, current stock and bond prices are the best evidence of commercial value. Where the conditions are abnormal, I would not agree that the current prices should have more weight than prices five years old, when the usual and ordinary method of valuing that property consisted in taking the five-year average. Leaving the tax question out of the case entirely, if I were buying the property, I would want to buy it on the present day market and not what it was worth five years ago and any other investor would.

I presume that when a man pays $15 or $20 for a share of Great Northern stock today, which is paying no dividends and no immediate prospect of any, he has in mind the fact that five years ago it sold for $125. Most persons if they paid $125 for a share of stock would figure it a loss if they had to sell it for $15 today. I cannot see that when you determine the average stock and bond prices of today, you are al-
247 ready giving some effect to the prices of five years ago. I think the bond prices of the Great Northern reflected the fact that bond interest was not being earned and bonds were selling to bring ten to eleven per cent to maturity and under normal conditions the bonds should not bring half that. Stock prices might have been in part reflecting the higher prices of five years ago. When you average five year prices, you are giving 20% weight to each year of the five year period, but if it is a fact that the last year is higher because the first year is higher, you are raising your avarage twice by reason of the fact that the first year was high.

I would say that if one company had been having a steady increase in stock and bond prices and another a steady decrease, but the five year average being the same, with the

result that the current price of one was very much higher than the current price of the other, the former would have an actual present commercial value greater than the latter. In other words, I would give some additional weight in that kind of a case to the current figures.

In Exhibit B, I get a five year stock and bond value of about $514,000,000. If I had deducted from that, not the market price of the bonds which formed a part of the figure, but the full par value of the bonds, the amount you would have to pay to pay them off, which was $350,000,000, I would have left for the value of the stock $164,000,000, or something like $65 a share, and that is probably six or seven times what the stock was actually selling for on the average during 1932 and 1933. Nevertheless, if you are using a five year average all the way through in the long run there is no over assignment except stability in the assessment.

I am admitting that for commercial purposes the use of five year figures might be a little grotesque, but I justify it on the ground that the state has always used it and that over a long period of time it will produce the same result as if you used single years, and in addition the fact that stock
248 market values of a single year may be grotesque.

If I am going to justify the use of a five year period with its currently grotesque result on the ground that over a long period of years it works out, consistency requires that I stick to it when it goes down as well as when it goes up. For this reason, the assessment for 1933 which is 24% above my computed value appears out of line.

It is somewhat correct to say that if we are going to adopt a policy of appraisal that would be followed for commercial purposes, we would be compelled to take less than five year figures, therefore, would get a much lower valuation and the assessment would be even more excessive than it appears here, and, on the other hand, if to avoid that dilemma we adopt the rule of using five years because it was the custom and works out justice over a long period, I absolutely condemn our assessment for violating that rule.

In order to get the figures in column 1 of Exhibit P, I apportion the total of all stock and bond prices between operating and non-operating assets, half in proportion to income and half in proportion to investment and use seven years average instead of five years on the income.

On Exhibit I, I developed an income ratio for 1933 of 34.36% on the basis of seven years. If I had used the basis

of five years that percentage would be 36.71%. If the stock and bond value were apportioned on the basis of income alone, by using five years I would give 2½% more to the non-operating property and 2½% less to the operating property than if I used seven years. And that 2½% applied to a $500,000,000 total value would reduce the value of the operating property about twelve and a half million dollars and the value of the property in North Dakota about $2,000,000.

Referring to the use of investment as a ratio of apportionment, if I had a $10,000,000 property that had fallen into losses and was producing a return on only $1,000,000,
249 and if I had another property that only cost $1,000,000 but had proved to be a very fortunate investment and were earning a return on $10,000,000, by using a composite of investment and income, I would give equal value to the two different properties. As a matter of fact, the one that cost $1,000,000 but was earning a return on $10,000,000 would be very very much more valuable than the one that cost $10,000,000 and proved less profitable. It is ordinarily true generally that income over a fair period of years is a much more accurate basis of apportionment than investment. When investors buy Great Northern stock and bonds they are governed almost entirely by the company's income from that source and very little from the amount that is invested.

I would not agree, however, that for the purposes of determining the apportionment of stock and bond value between operating and non-operating properties, the fair thing to do would be to give most, if not all, of the weight to the income ratio, and very little if any to the investment ratio, because you are comparing unlike income. When a man buys stock and sees that last year the company earned $2 a share or $8 a share or whatever it may have been, that is the figure that governs his action in buying or not buying, regardless of where the income comes from, but when you compare mortgage income with stock income on the basis of the percentage relation, you would probably get an inaccurate result in assigning value. It is true that what you are trying to determine here is the extent to which Great Northern stock and bond prices are affected by the non-operating property. In buying stocks or bonds of the Great Northern, the ordinary market investor does not stop to analyze the sources of the income that is paying his dividends, as to whether that income comes from stock and bonds of subsidiaries, but I think the informed investor does. At any rate, if instead of
250 following my method of apportionment which produced 30.29% for non-operating property in 1933 on

Exhibit I, I had used income alone for five years, I would have a percentage of 36.71% for the non-operating property instead of 30.29%, a difference of about 6½%. And correspondingly, I would have apportioned 6½% less of the total stock and bond value to the railroad and that would be about $32,000,000 less, which would have reduced North Dakota value about $6,000,000.

Referring to the second column of Exhibit P showing the capitalization of the five year earnings and considering a valuation for commercial purposes, I do not think that a property with earnings falling from $31,000,000 a year to $1,000,000 a year in five years would be as valuable and would have as high an appraisal as one with earnings which had been ascending from a million dollars five years ago to $31,000,000 today. I would appraise the company with ascending earnings much higher, even though the five year average of the two were the same, and I would agree that for commercial purposes at least, if a five year figure were used at all, the later years should be weighted.

Possibly, for commercial purposes to a limited extent, the number of years earnings that should be considered for capitalization varies according to the kind of property you are valuing and the circumstances surrounding it. If a railroad has been struggling along without earnings for a good many years and then during the current year some big iron mines are discovered and open up or some forests are opened up or something happens that produces high earnings during the last year with the probability of similarly high earnings in the future, I would say that in that kind of a case you should take just the last years earnings and disregard the prior years when conditions were different, if there was a prospect that those earnings were going to be continued. In other words, if conditions had radically changed, I would consider
the earnings subsequent to the time the conditions
251 changed if they appeared to be permanent.

On the other hand, if I had a railroad like your ore lines that had been doing a very heavy ore business up to five years ago, and then for some reason the ore mines were closed down during the current year but were about to be reopened, there is a case where the single years earnings five years ago might give a better index than any other average. In considering the number of years earnings which we should capitalize for the Great Northern Railway, we should apply the same kind of a test and consider to what extent circum-

stances have permanently changed, if we can forsee the future, before we determine how many years earnings we should capitalize.

Referring to Mr. Beidelman's testimony that, without necessarily foreseeing the future, certain volumes of traffic have been lost which the Great Northern formerly had, and that those changes appear to be permanent at least for the present, the argument that earnings of the last three years are more in accord with probable future conditions than earnings of five years and that we should capitalize three years rather than five years in determining present value, has merit. However, I would not say that in the second column of Exhibit P we should use something less than five years earnings for capitalization, if the policy of the State Board had been to use five year averages at all times during boom markets as well as during declining markets. Here again, however, if we are going to justify the use of five year figures solely on the ground of rigid adherence to continuous policy, we again necessarily condemn the 1933 assessment for not adhering to that policy, but that is modified by other conditions and circumstances existing in that year as to all other properties. Under the present outlook, I would admit that if
252 we were making an appraisal of the property for commercial purposes, we would probably get more accurate results by using something less than a five year period.

By using a five year period, the total earnings for those five years were something under $100,000,000, and out of that $100,000,000 about sixty-one or two million dollars were in the boom years 1928 and 1929. If I were buying the property, I would think that to throw in $63,000,000 of boom earnings that are four or five years old with thirty-six or seven million of depression earnings that are current would be giving a little too much weight to the boom figures. And probably present stock and bond prices show that actual investors are putting more stress on current earnings rather than on the earnings of five years ago.

My figures in column 2 on Exhibit P are the result of taking average earnings for a five year period and capitalizing them at 6%. I would agree that for the purpose of a commercial capitalization, we should use a rate of capitalization that would be required by investors in the particular enterprise and what that return would be would vary greatly with different enterprises. I presume that an oil well that might play out in two or three years might require a rate of 50% capitalization and a factory producing some fad like jig-

saw puzzles might have big current earnings and probably last a year or two and an investor there would require a higher percent than on a stable property. I am inclined to think that there should be some difference in rate of capitalization between different railroads where some had variable earnings and danger of traffic losses and labor troubles and others were old established roads of steady earnings. The rate would also vary with the number of years earnings that you were considering. If we were capitalizing the earnings of one year 1932 on the Great Northern which was only a million dollars, and the lowest the company ever had, and almost certain to be earned in the future, an investor would prob-
253 ably use a very low rate, and on the other hand, I presume that if we were capitalizing five years earnings 2/3 of which were boom year earnings with some question as to whether they would ever recur, an investor would want a higher rate of capitalization. The rate would be higher if you were capitalizing income from stocks than if you were capitalizing income from bonds.

I presume that four or five successive years of crop failure such as we have had in this territory might create some doubts as to the future in the mind of the investor and make him demand a little higher rate.

I don't think the year 1932 has any significance. 1933 was only half gone when this assessment was made and we had a new deal and bright outlook before us. Very little property in the United States was earning any appreciable rate in 1932 regardless of the class of property. Under conditions existing then, you could not get an investor to put his money into anything. He was trying to get rid of anything and put his holdings into cash.

Referring to Exhibits R, S and T, illustrating the Balch method that was originated some years ago and was used in the Eveland case which later came up in court about the year 1932. I do not know whether it had ever been used before then. Mr. Balch has advocated the use of five year stock and bond figures and five years earnings and 6% in the past, but he may have changed since the depression. I do not know whether Mr. Balch has any method of ascertaining the value of non-operating property. The system value on the Balch exhibits is exactly the same as Mr. Balch has followed in the past and the amount of non-operating property deduction is an estimate so far as any Balch formula is concerned. The system value on the Balch exhibit is the system value to a dollar that I arrived at in my own Exhibit P. The exhibit only shows the Balch method of apportionment and any criti-

cism that may have been made of the system value in
254 Exhibit P is also applicable to the Balch exhibits R, S and T.

As to whether the five factor ratio used in schedule 4 on Exhibit P and advocated in the defendant's answer is proper in all cases that is difficult to answer. I believe that there are circumstances and conditions sometimes that make the use of any particular factor inaccurate. If your ore lines were owned by a separate corporation and I were allocating the system value between Minnesota and Wisconsin, possibly the five factor ratio would not be a fair one. It could be criticized. I think it would give a correct apportionment. With 90% of the track miles in Minnesota and 90% of the locomotive and car miles in Minnesota, 90% of the ton miles in Minnesota and, if you used a mileage prorate of revenue, 90% of the gross revenue in Minnesota and only 50% of the physical property in Minnesota, you would get an average for the five factors of something like 80 odd per cent. Whether in that particular case an allocation based on cost of service as worked out by Mr. Turnburke would produce an accurate and fair result, I would want to test that out. I would not attempt to say without studying it. Without the Minnesota mileage the Wisconsin mileage would be of little value, and it is also true that without the Wisconsin terminals and lake navigation and opportunity to dispose of the ore, the Minnesota mileage would be of little value. You are trying to split up an indivisible thing. I would not be able to state whether an apportionment of revenue and value in that particular case in proportion to the cost of producing the service in each state if accurately determined would be a fair method. It has some merit undoubtedly. Any line of railroad is a unit and when you try to allocate values to any particular part of that unit it is a good deal like trying to divide up a horse and determine what part of the whole value the horse's leg might be.

The horse is no good without the leg.

255 Referring only to the apportionment of revenues and not value, I think that property investment should be given some weight as well as the relative revenues in that particular case. I don't get the philosophy or theory of apportioning value according to expenses because it is the opposite of value. Assuming that the ten mile terminal operation in Wisconsin costs 40c and that the 90 mile roadhaul operation in Minnesota costs 40c, and that the plants in Wisconsin and Minnesota have equal investment and cost and that the revenue is a dollar, I would not be able to point out any criticism to apportioning that dollar of revenue equally between the two states under those circumstances. I cannot see any re-

spect in which that method would produce unfair or inaccurate results and cannot point out anything of that sort.

Referring to a grain shipment from North Dakota to the Twin City terminals, it would seem to me that part of that cost which is incurred in Minnesota is on account of your North Dakota business. It might be true that if you should apportion the revenue on a mileage prorate instead of in proportion to the cost of the service, the result would fail to give Minnesota enough revenue to pay operating expenses and a return on its investment and that you would give North Dakota more than enough to pay for its service, although I have always thought that the originating expense on traffic should also be taken into account as well as the terminal expense. It has always seemed to me that if a certain portion of the railroad is more profitable that fact should be taken into consideration. I am not acquainted with the theory of apportioning value on the basis of cost of service. I would not be able to point out any unfairness in it in the instance that you now cite.

If one terminus of a railroad is 10 miles inside of the border of one state and the other terminus is 100 miles across the border of another state and if the 10 mile section
256 in the first state is obstructed by a mountain, and if two competing railroads are built between those termini, one of them reaching the border of the first state ten miles away by a roundabout line 100 miles long around the mountain so that on that particular railroad you would have 100 miles of line within each state, but if the second railroad reaches the border by a direct ten mile line through a tunnel in the mountain, the result being that the first line has 100 miles of track in each state or 200 miles in all, and the second line has ten miles in one state and 100 in the other, or 110 in all, and if the roundabout line of 100 miles in the first state costs just the same as the tunnel route of 10 miles and if both routes handle the same class of traffic at the same rates, I would not say that a five factor allocation of revenues would be fair on both of those railroads. I would not say that the railroad with the 100 mile roundabout route around the mountain should get half of the through revenues, while the railroad with the same cost of plant through the tunnel would only get 10%, which would be the case if the five factor allocation method were used for both of them. I would not consider that fair. As to an apportionment of revenue for both of those railroads in proportion to their operating costs in each state, plus a return on their investment, that is rather a complicated situation. I would not be able to point out any fatal defect in that method in that case. In the case of the

ore lines and in the hypothetical case just mentioned, I will admit that the five factor method would not produce correct results and that I cannot point out any fatal defect in the cost of service method of allocation.

In the last hypothetical case mentioned, you would not get any more fair results by using locomotive or ton miles than you would by using train miles and the result would be about the same. The same would be true of ton miles, or passenger miles. As a gross revenue factor with an apportion-
257 ment of through revenues on a mileage prorate, I think that all of those factors would probably produce an inaccurate result, and in the instance cited you would not make it any more accurate by combining three or four inaccurate factors.

In the case of the actual situation on the Great Northern where mileage was shortened by construction of additional tunnels in Washington, the shortening of the mileage was practically nil in treatment of percentage. It did, however, assign a very slight amount more revenue to North Dakota and other states. I do not know whether that is assigning an unfair advantage to another state which has already got a straight line. I do not know whether this is one weakness in the five factor allocation method.

As to whether it is necessary to give terminal states more than a mileage proportion of the through revenue, you are trying to break up what is an indivisible item of property. Any assignment of values to a state is arbitrary. I do not see why revenue should be apportioned on the basis of cost because of the difficulties of operation in a particular state. That does not mean that there is more value there.

In order that North Dakota may enjoy her revenue on shipments moving between Puget Sound and the Twin Cities, it is necessary that those shipments have a terminal handling on Puget Sound and also in the Twin Cities and that in order to give that terminal handling, terminal costs must be incurred. A part of those costs are incurred on account of the business in North Dakota and all other states on the line but the location of those costs is at the terminal. The revenues are derived from the entire shipment. The terminal costs must be included in the freight charges, undoubtedly, but in allocating the revenue, I do not know that it is neces-
258 sary to allocate back to the terminals enough to pay the terminal costs. The revenue is derived from transporting goods from one place to another.

If the terminals on Puget Sound and in the Twin Cities were operated by independent companies whose ownership was separate and distinct from the ownership of the road haul, and if the Interstate Commerce Commission finds that the cost in each of the terminals is 25c a hundred pounds and that the cost of the entire roadhaul is 50c a hundred pounds and, therefore, establishes a rate of $1.00 to include the two terminal services and the roadhaul, if I were apportioning that dollar of revenue between the company owning the line and the two companies owning the terminals, I presume that I would necessarily apportion 25c to each of the terminal companies and 50c to the roadhaul, and in that case I would think that the revenue would have to be apportioned in proportion to the cost of service.

If we have a repair shop outside of North Dakota used for repairing cars and engines moving through North Dakota, then on the cost of service method, the apportionment of these costs would be given over and assigned to North Dakota in apportioning the revenue. If they were billed against North Dakota operation in proportion to the extent that they were used for North Dakota operations then to that extent I would agree that an apportionment of the revenue in proportion to the cost of service would be fair. You are trying to determine where the revenue is earned on the basis of cost of service, and if the expense was incurred on account of the cost of service in North Dakota under your theory it should be apportioned to North Dakota regardless of where the shop might be located.

If you have a through shipment that pays $1.00 for the entire haul and if 10c of the cost is incurred for car and
259 locomotive repairs in a shop outside of North Dakota, I would think that if that 10c is billed against North Dakota and included in North Dakota costs, a corresponding portion of the revenue should be credited to North Dakota, but if the 10c were charged to the state where the shop is, I would not agree that the corresponding part of the revenue should be allocated to that state.

If the ownership of the entire Great Northern railroad were divided according to state lines so that the lines in each state were owned by an independent corporation connecting with each other and exchanging through business in about the same manner that it is exchanged now, then in view of the fact that the large terminal and large shops and tunnels are all outside of North Dakota and that there is more embankments, more bridges and heavier steel in the corporations outside of North Dakota, and that the average mile of

plant owned by these other corporations contains twice as much physical property as the average mile of plant in North Dakota and also involves a higher operating expense, I presume an agreement between the roads would involve some consideration of apportioning the total revenue so as to give the outside corporations enough revenue to meet all of their expenses and investment on their plant as well as doing the same for North Dakota. As a matter of practical business, this would surely be done. As to whether this would involve a division of revenue in proportion to the cost of service, I believe that other things enter into that. I never made an assignment of that kind but cost of service would certainly be considered.

As to the apportionment of the through rate as illustrated in Mr. Turnburke's Exhibit 11, as far as the allowance to use of property is concerned, it probably should be
260 given consideration. I cannot see why the difficulties of operation should be capitalized and the lines should be given great credit because of high expenses. I do not say that it is wrong to give each state enough revenue to pay its operating expenses. But the cost of operation in any particular state is impossible to accurately ascertain and always has been so considered. However, if the operating expenses could be accurately determined, I presume that an apportionment of the revenue on an individual shipment on the method shown in Exhibit 11 would be fair but not an apportionment of value. I presume that such an apportionment in proportion to cost of service is more fair than a track mileage proportion as to revenue. As to whether it would make any difference whether the rate were 4% or 1% or 10% on the investment, I do not see very clearly just what difference the difference in the rate would make. I presume that the method is just as fair in the case of an individual shipment whether it is a rate that pays a low or high rate. I am not prepared to say whether the method illustrated in Exhibit 11, if applied to every individual through shipment on the line would produce a correct apportionment of interstate revenue. I have never studied railroad accounting. The reasons that I have in mind to the contrary are that through rates are purely competitive and that the short haul or the easy haul, the line that has the shortest haul and the easiest haul and the cheapest haul fixes the rate that governs all other roads and you are capitalizing the difficulties of operation.

Assuming that the entire body of interstate traffic on the railroad is paid by some rates which produce a high return

and by some that are made very low for competitive
261 and other reasons and some that are intermediate paying different rates of return, I cannot see any unfairness or impropriety in applying Mr. Turnburke's method as illustrated in Exhibit 11 to each individual movement, apportioning the revenue on each individual movement as between states in such a way as to give each state enough to pay its operating expenses, and then adding up the total of the individual assignments in each state in order to determine the state's proportion of the system interstate revenue. You would then assign to Minnesota and Wisconsin the iron ore traffic that is in those states and none of the revenue from that traffic would be assigned to any other state. Likewise, the wheat movement out of North Dakota and the interstate movement into North Dakota from eastern points should be assigned to the states where the operations actually took place. I cannot see any unfairness about that.

One of my main criticisms of Mr. Turnburke's method in Exhibit 12 is that instead of allocating each movement separately he lumps them all in one jackpot. I have considered how much the results might vary between Mr. Turnburke's method in Exhibit 12 and the method of allocating each individual shipment separately, but I did not have any information upon which to determine the difference. No such information is available and no records are kept in such a way as to determine that matter and no such information is reported to any state taxing body or railroad commission.

As to Mr. Turnburke's testimony that it is possible to determine accurately the operating expenses incurred by a through railroad in any state, I know very little about that phase of the railroad business, and I would not be able to point out any particular item that cannot be correctly
262 determined for a state. It would seem to me, however, that property in one state is often used to furnish service to property in another state and just how those expenses are allocated I don't know.

I would agree that a locomotive mile moving 200 tons on a North Dakota branch should not be given as much credit as a locomotive mile moving 10,000 tons or producing 50 times as much service on an ore line, as an allocation factor. I would also agree that a car mile moving 16 tons in North Dakota should not be given as much credit as a car mile moving 75 tons of ore in Minnesota. As to whether car and locomotive miles alone would be unduly favorable to North Dakota, the item of revenue would enter in there, the revenue derived

from the commodity. I do not know as to tonnage, but I am under the impression that it is not true that a locomotive in North Dakota hauls less cars than on the rest of the system.

As to whether the car mile factor alone would be unduly favorable to North Dakota with a 16 ton load in North Dakota compared with 30 tons on the rest of the system, it does not work out that way as to the whole, I do not believe. This would be largely on account of the iron ore business which does not touch North Dakota.

In Exhibit J, I compared North Dakota with the entire system and ton miles handled per mile of all track. The reason for the use in that manner is that miles of road is seldom, if ever, used as an apportionment factor, but all track mileage is a commonly used apportionment factor. I I believe it is correct that ton miles per mile of road is universally used as a measure of traffic density and that ton miles per mile of all track are never so used. In the 1932 I. C. C. statistics of railways, traffic density is entered up on an all-track mileage basis as well as miles of road. That is a new departure. If you had 100 miles of road in
263 North Dakota with 10 miles of side track and terminals and 100 miles in Minnesota with 50 miles of terminal track and the same tons moving over each, I do not know whether it would be fair to measure traffic density by dividing the number of tons by 110 in North Dakota and by 150 in Minnesota. If you are going to divide by miles of all track including terminal tracks and should divide that into a ton mile figure including the ton miles made on the terminal tracks and switching service, ton miles on switching service at the originating point should be taken into consideration as well as ton miles at terminal points. I offered Exhibit J to prove that North Dakota has a traffic that is not very much less dense than the traffic on the system. If I had used ton miles per mile of road, I would have shown that in fact North Dakota miles are much less dense than the miles on the system.

As to whether a similar criticism is applicable to Exhibit K and Exhibit L, I would not say it was a criticism. An allocation of value on a mile of road basis would obviously be unfair because a mile of road in North Dakota is not comparable to the average mile of road on the entire system and that method of apportionment of values has been universally condemned but the all track mileage method of apportionment is in very general use and I have merely tried to test whether the all track mileage was unfair by these exhibits. I would show that if you made a comparison on a mile of road basis,

naturally the traffic density in North Dakota is less than on the entire system, but a mile of road in North Dakota contains less traffic than the average mile of road on the entire system. The all track mileage factor is considered the better factor. It is substantially correct to say that Exhibit K is offered for the purpose of showing that the density per mile of all track is almost as great in North Dakota
264 as on the system and that, therefore, the all track mileage ratio is a proper ratio to use in allocation. The all track mileage ratio has been condensed in some cases where it obviously was unfair and these exhibits are presented to show that it was not unfair.

Referring to Exhibit L which purports to show that North Dakota tracks earned $3000 a mile while the system earned $2816 per mile, in obtaining those figures I have not deducted taxes either in North Dakota or on the system. In determining my revenue per mile of track in North Dakota, I used the figures reported to the State Railroad Commission or the State Tax Commission. If a mileage prorate allocates too much revenue to North Dakota my average earnings of $3000 a mile would be too high. In the reports reporting gross revenue, the interstate revenues are allocated to North Dakota on the basis of the miles of road over which the shipment is hauled and I have taken revenues allocated to North Dakota on that basis of miles of road and then divided them by miles of all track instead of miles of road to get my earnings per mile. That combination is not unduly advantageous to North Dakota for the purposes for which the table was presented, to test the validity of the all track mileage basis of proportion. Both of the last several exhibits you have mentioned have been merely for that purpose.

On Exhibit I, I show that the composite ratio of non-operating to total assets is 30.29%. In round figures the system value of $345,000,000 as shown on Exhibit P for the 1933 assessment is 70% of the total corporate value. This would give a 100% corporate value of about $493,000,-000.

265 In order to get the assessment for North Dakota in 1933, I have to increase the computed value as shown in Schedule 4 of Exhibit B by nearly 25%. If I increased the total corporate value of $493,000,000 by 25%, I would get about $597,000,000 or practically $600,000,000 in round figures. The par value of all the outstanding bonds of the system was $350,000,000 in round figures so that if the total corporate value determined in proportion to the North Dakota assessment were $600,000,000 and the company discharged all of

its bonds by paying them at par, it would apparently leave a value of $250,000,000 or $100 a share for the stock or over seven times the average market value in 1932.

In Exhibit O, I show the 1933 assessment as being 19% under 1917 and 9% under 1919, but the earnings value of the property had decreased at least 33-1/3% from 1917 and 1919 to 1933 and the assessment only 19%. The income in 1919 was almost 50% above the income in 1933 and in any event, the decrease in value as shown by decreased earnings was much greater than the decrease in assessment.

I recall that in 1919, the market value of the stock was about $100, which would produce a stock and bond value in 1919 of somewhere near $600,000,000 and in round figures. The stock and bond value of the company in 1933 had also decreased by a bigger percentage than the assessment.

Even if it were possible to determine net income in a state accurately, I would not agree that it would be the very best measure of the value of the property in the state and also the best measure of apportioning system value in a state. I think if a railroad line in a given state produced no net income which could be directly attributed to that state, none whatever, it is still an integral part of the system which is necessary for the conduct of the entire railway system and it has a value even though there is no net produced in the state.

266 Redirect Examination.

By Mr. Shaft:

Referring to Exhibit I and to the non-recurring income from non-operating property which I referred to, the principal item of non-recurring income is a special dividend received from the Burlington Railroad in 1930 amounting to $4,150,895. There undoubtedly are other items of non-recurring income but I have not got specific information on that and this is the largest single item. That, however, was not the principal reason for using a seven year period in the case of the Great Northern. In order to explain that I will have to go back to the fact that many years ago, I think it was back in 1902, the Great Northern and Northern Pacific Railway Company bought approximately 97% of the Burlington stock. They issued collateral trust bonds amounting to $230,000,000. The purpose of those collateral trust bonds was to purchase the Burlington stock. When those bonds became due, I think in 1921, it was necessary to refund the original bond issue and the historical record shows the Great Northern Series "A" General Mortgage Gold Bonds were

issued to refinance the original collateral trust bond issue as to the Great Northern proportion. The statement has been made that those bonds are secured not only on the Burlington stock but on the Great Northern Railway itself, and that is true, but the reason for that was that the Burlington stock in itself was not sufficient security for the issuance of the $115,000,000 bond issue, the security of the Burlington stock was insufficient to float those bonds on the market, consequently they made a general mortgage on a large amount of Great Northern property. What I am leading up to is this, that that asset of Burlington stock which for a long period of years was considered very, very valuable, has now turned into a liability and in 1932 and also in 1933 it was necessary
for the Great Northern Railway Company to dig down
267 in its own pocket and pay out $4,919,593 in addition
to the dividend that they received, the small dividend that they received from the Burlington in order to pay interest on this bond issue. The result of having to dig into its surplus and other resources in order to retain this asset has been to depreciate the securities of the Great Northern that were junior to this bond issue, particularly the common stock, and going back to the item of non-recurring income, when you apportion values on the basis of relative income, it amounts to almost the same thing as capitalization and when you give the same weight to a non-recurring item of income as to regular annual income, why you are going to get an incorrect result and for these two reasons I thought it much fairer to use a seven-year period in finding a ratio of relative income from non-operating property to the total income of the corporation. I might add in addition to that that using a five-year ratio in place of the seven-year ratio and eliminating non-recurring items of income, which in this case is more than off-set by what the Great Northern dug up out of its own pocket in 1932, we obtain a ratio that is approximately the same as the ratio I have in the exhibit for the seven-year period. The ratio thus obtained is 35% instead of 34.36% and the composite ratio of a composite of the property and the relative income ratio becomes 30.60% instead of 30.29%, a difference of less than a third of one per cent.

I call that special dividend an item of non-recurring income because of the fact that for quite a period of years the Burlington had paid a regular dividend of I believe 10% and this was a special dividend of 5% in addition. The dividend from the Burlington over a long period of years was 10%. That was made in 1930. I would not, however, eliminate that non-recurring item of income if it was not more

than off-set by the fact that the Great Northern had
268 to dig down into its own pocket in order to carry this asset.

Referring to my testimony that I had tried one other method of valuation known as the Haugen method, that method produces a much more favorable result to the state as to the year 1933 and also for each of the preceding years. I did not introduce it in evidence here because I confined my exhibits to the generally known and accepted methods of valuation and while the Haugen method has had some use it has not been given general recognition. In connection with its use in 1933 it showed an over-assessment in North Dakota of the Great Northern property of about 8%.

In presenting these exhibits and tables, it has not been my intention to state that any of these formulae produced a true valuation of the Great Northern Railway. My purpose has been to show that by the use of most any formula that has been given any recognition the assessment in the four years immediately preceding 1933 could be justified and then I have shown what results were produced for the year 1933 by each method.

As to my statement that the excess in the 1933 assessment over the results produced by any of these tables operated to some extent to condemn the 1933 assessment, I will say that the very best statistical evidence of value are not definite proof of value and there were a number of peculiar and extraordinary circumstances for the Board to consider in 1933 that are not in any way indicated by statistical exhibits. I do not feel that variance from the results produced by my table present an absolute showing of a wrongful assessment on the part of the State Board.

When I say that the State Board of Equalization had unusual facts and circumstances before it in 1933, I refer
269 to two different things, first, the general economic situation, not only in the United States, but particularly in the State of North Dakota, with an almost total collapse in the value of all property and with almost a total collapse in the income producing ability of property not only in North Dakota but generally; and the second matter to which I refer was the fact that in 1932 the people of North Dakota by an initiated law changed the tax base from 75% of full value to 50% of full value. Due to the various tax limitation laws limiting the tax levies of all classes of taxing districts this handicapped the various equalization boards and particularly the State Board of Equalization in

reducing property values down to correspond to some extent to the drop in income and corresponding to the actual loss in value which had occurred. The tax base had been more than cut in two in a few years. In 1923 the tax base on a 75% valuation was approximately a billion and eighty-nine million. This had gradually shrunk and then was decreased by one-third in 1932 by reason of the initiated law, and the various taxing districts, counties and school districts, to a very large extent, were unable to levy sufficient revenue under the new tax base to meet ordinary running expenses.

Referring to my statement that in computing the stock and bond values of the railroad, the state of the market during the portion of the year 1933 preceding the meeting of the Board of Equalization had not been taken into consideration, I will say that the three months preceding the date of the assessment or four months, showed a tremendous upward trend in the stock and bond market and we were in the middle of a boom during the months of May, June and July. When I speak of the stock and bond market, I include all stocks and bonds. There was a very sharp rise in Great Northern stock. I don't recall the extent of that rise.

270 Recross Examination.

By Mr. Dorety:

I meant a sharp rise over what the price had been just previous to that time. July, 1932, was the low point in the stock market in a great many years, the average of all stocks and bonds listed on the New York Stock Exchange fell to an all time low level for a good many years in the month of July. I know that there was a collapse right at the time of the bank holiday. The 1932 average on Great Northern stock was about $13.00. And if I recall it, the Great Northern stock went much higher than that during that rise. I have not the exact figures on the total Great Northern stocks and bonds with me.

Redirect Examination.

By Mr. Shaft:

I have looked over the brief which was filed by the Great Northern Railway with the State Tax Commissioner in connection with their 1933 taxes. The factors of allocation used by them were all track mileage, car and locomotive mileage, ton and passenger mileage and gross operating revenues, the four, the same four as are given in schedule 2 of Exhibit P. By the application of those four factors to the system

value which I have ascertained, a percentage of 18.05 of system value was obtained.

(At this point the defendant concluded its direct testimony and rested its case.)

V. P. TURNBURKE, a witness on behalf of plaintiff, was recalled in rebuttal and testified as follows:

Direct Examination.

By Mr. Dorety:

I have prepared a statement comparing the North Dakota assessment of Great Northern operating property each year from 1928 to 1932, inclusive, with the actual value as
271 computed by the method shown in my exhibit 12. This statement is marked Plaintiff's Exhibit 21. The figures on it are correct and correctly show what they purport to show. The figures in column 1 are the system value as determined in Defendant's Exhibit P, column 3, and those in column 2 are the rate of allocation to North Dakota as shown on Plaintiff's Exhibit 12 for each of the five years shown. Column 3 is the product of columns 1 and 2, representing the amount of the system value assignable to North Dakota on the basis shown in Plaintiff's Exhibit 12, and the actual assessment shown in column 4 for the State of North Dakota is from Defendant's Exhibit P, column 8. The fifth column is a computation of the percentage of over-assessment in North Dakota, using the system value as determined by the defendant in Exhibit P and the North Dakota apportionment on the basis of Plaintiff's Exhibit 12.

As to how values for the Great Northern operating property in North Dakota, if computed by a similar method each year for the years prior to 1928, would compare with the assessed values in the same years, the factors used by the State necessarily produce a very much higher value for North Dakota in any year than the method used in Exhibit 12 and an application of the method in Exhibit 12 would necessarily show over-assessments of approximately 50%, if not more, in every year. The result of the State's method of allocation is to levy a tax in North Dakota upon the terminals and other values outside the state, and this would be true in any past year in which the State's method had been used.

I am familiar in a general way with the railroads of the other railroad companies competing with the Great Northern for the movement of traffic between the Middle West and the

North Pacific Coast. I think it is true as a general statement that the situation on those lines is approximately
272 the same as on the Great Northern with respect to location of principal terminals and shops and expensive mountain construction and that their operating expenses and capital costs are correspondingly high in states where those of the Great Northern are high and correspondingly low in states where the Great Northern's are low.

I have prepared Plaintiff's Exhibit 22 computing system values for the Great Northern Railway property on various bases. This is a correct statement. Exhibit 22 shows a computation of system value on several different bases, the average for the three years 1930 to 1932, the four years 1929 to 1932, and the five years 1928 to 1932. The first set of figures, item 1, show a capitalization of the net railway operating income for each of the three years mentioned, item 1-a being at the rate of 7%, and shows a system value of $170,000,000 for the average for the three years and $244,000,000 for the average for the four years and $284,000,000 for the average for the five years. If the capitalization were made at 6%, that is the capitalization of the net railway operating income indicated, system value would be $199,000,000 the average for the three years, $284,000,000 the average for the four years and $332,000,000 the average for the five years.

Item 2 is a stock and bond value for the average for the three years, the average for the four years and the average for the five years, after deducting an allowance for the non-operating property, which is included, out of the stock and bond value. Item 2-a is a deduction on the basis of a five years income, 36.71% and I have used that factor for each of the three items, that is, I have not used three years income for the three years and four years income for the four years, but I have used the five years income or 36.71% for each of
the three years, deducted the 36.71% from the average
273 stock and bond value for the three periods. Item 2-b I have made a deduction on the basis of the composite income and asset ratio developed by the defendant in Exhibit I, 30.29%, which because of this smaller percentage makes for a somewhat higher system value, as the figures indicate. Item 3 on Exhibit 22 is a capitalization of the prospective future normal net railway operating income of $14,000,000 based on Mr. Beidelman's testimony as to the normal, expected future gross of $86,000,000 and my testimony that that $86,000,000 gross would be translated into $14,000,000

of net railway operating income. Item 3-a is a capitalization of the $14,000,000 at 7% and item 3-b at 6%, system value of item 3-a being $200,000,000 and for item 3-b $233,000,000. I have also placed on this exhibit simply for information, the assignment to North Dakota based on the net income before taxes as developed in Plaintiff's Exhibit 12 for the five years 12.22%, and the basis of the five factor per cents Defendant's Exhibit P, Block 4, which I understand is the basis used by the defendant in making its answer in this case, the figure of 18.34%.

This exhibit is not offered with the idea of advocating any particular one of the bases which it shows. It is simply to spread before the court these various bases for the court's own information and benefit. With the aid of this exhibit, it is possible for the court or anyone else, after determining how long a period should be used for earnings and what rate should be used, to determine by ready reference what the system value would be on that basis, and after determining how many years stock and bond figures should be used and what basis of apportionment should be used in determining the value of the railroad.

(The documents marked "Plaintiff's Exhibit 21" and "Plaintiff's Exhibit 22" were offered and received in evidence and are included herewith as Plaintiff's Exhibit 21 and Plaintiff's Exhibit 22.)

274 In referring to Defendant's Exhibit C I want to point out that the amount shown as the dividends declared under the fourth column, dividends declared per share, while technically correct does not represent the dividends paid. Referring particularly to the figures for the year 1930 that shows 7½% as the dividends declared. That $7.50 is the sum of three different declarations of dividends, three semi-annual declarations of dividends, and at no time for the last forty-five years has the Great Northern paid over $7.00, and at no time in the last ten years has it paid over $5.00. The facts are that on the basis of the dividends paid in 1930 there was $5.00 paid the same as in previous years; that in 1931 $4.00 were paid and in 1932 $1.00 was paid. In other words, there was no increase in the dividends paid in the face of this sharp falling off of earnings that was occurring at that time, which is clearly indicated in the third column of Exhibit 6.

Exhibit F shows a ratio of investment in operating and non-operating property, which I think is entirely immaterial for the purpose of apportioning stock and bond values. A property may represent a very large investment on the books

of the company and yet be worthless at the present time either for sales purposes or for income. On the other hand, the property may have some little book value and still be a valuable asset as an income producer. It seems to me that the income actually received from the non-operating property is the best criterion of their value, regardless of the amounts that they are carried on the books of the company. In fact, if anything, I would think that the value of the non-operating property might be somewhat in excess of what its income produces, due to the valuable assets represented by that property, which is not at the present time producing any income.

275 Exhibit H shows a ratio of non-operating income to the total income on the basis of a seven year period. There has been considerable testimony as to why the seven year period was used instead of a five year period, to the effect that an extra dividend by the Burlington, which occurred during the five year period, was non-recurring, and, therefore, the period should be lengthened to seven years. However, I want to point out to the court that during the five year period the Burlington Railway actually paid out in dividends considerably less than it earned during that period, even including the extra dividend; so that it could have adopted a higher basis of dividend disbursements than it actually did adopt, and I take it that if the dividend, instead of having been a $5.00 extra in one year, had been $11.00 for each of the five years instead of $10.00, that there would be no objection to it on the ground of a non-recurring item. In any event, the fact remains that this is the only place where there has been any departure from a five year average where a period has been used at all in excess of one year, and that by making such departure it increases the assignment of value to North Dakota on the State's basis.

I do not know of a single case where the dividends received by the Great Northern Railway Company from its subsidiaries during these five years were in excess of those earned and I know of no extra dividends that were received except the $5.00 extra that had been pointed out by Mr. Baker.

If Mr. Baker had used the five-year period instead of the seven-year period, I would agree with him that it would have increased the apportionment of value to non-operating property up to 36.71%.

276 Exhibit I develops a composite ratio for non-operating property, using the income basis for seven years and the ratio of assets for the preceding year added together and divided up to obtain the composite ratio.

The composite ratio for 1933 is only slightly over 30%, whereas the five-year income ratio for that year would be 36.71% or nearly 6½ points higher. If instead of 30.29%, the ratio of the non-operating income to the total income for the five year period were used it would produce a system value for the railroad of nearly $32,000,000 lower than was produced by the defendant, and this when applied to North Dakota would result in an excess of about $6,000,000, the assessment over the valuation.

Exhibit J is headed "A comparison of freight traffic density per mile of all tracks operated". I have seen the freight traffic density used in many a case in the past twenty years of my experience but I have never seen it worked out on the basis of the miles of all tracks operated before I saw this exhibit. The Interstate Commerce Commission in its annual reports prescribes at schedule 508 the averages per mile of road for various items, including the ton miles of revenue freight per mile of road, which is item 125 on page 509 of the annual report of the Interstate Commerce Commission. That is the factor commonly known as the traffic density. The reason why it is improper to divide the ton miles of revenue freight by the total miles of track is that the dividend, that is the ton miles of revenue freight, does not include the ton miles made on all tracks but only the ton miles made upon the miles of road track, but the divisor, the miles of all tracks operated used in Exhibit J, includes the mileage of tracks over which in fact the tonnage is moved producing ton miles, but the ton miles so produced are not included in the dividend, so we have the use of a dividend that is a partial reflection of the total ton miles and the use of a divisor that is a complete reflection of all miles of track.

277 If I were to compare the ore lines in Minnesota and Wisconsin as to density by using ton miles per mile of all track, I would probably show 2/3 as much density in Wisconsin as in Minnesota, simply because the Wisconsin mileage includes a large terminal mileage at the docks, notwithstanding the fact that the density of that particular traffic is necessarily the same as it is for a through train movement. Another thing about Exhibit J is that the comparison is made between the State of North Dakota and the system and not between the State of North Dakota and the balance of the system, thereby having the figures for the system dragged down by the lower traffic density in the State of North Dakota.

If Exhibit J were corrected by showing ton miles per mile of road and by comparing North Dakota with the balance of

the system, it would show that the density in North Dakota is no more than 2/3 as great as that for the balance of the system.

The same criticisms which I have just made would apply to Exhibit K. The various columns in Exhibit K, the operating revenues, traffic units, car and locomotive miles, are all based on considering only the miles of road and not the miles of track or the operations connected therewith. Furthermore the comparison is between the system and North Dakota and not North Dakota with the balance of the system.

Here again a correct computation would show a very much lower density for North Dakota.

Exhibit L purports to show that the ratio of operating expenses to revenue is lower in North Dakota than for the system and that the net revenue per mile of track is greater in North Dakota than on the system. This result is brought about directly by the use of the mileage prorate in dividing interstate revenues on a mileage basis. If this same method was used in the State of Washington and Wisconsin it would show that those states had no net revenue per mile but instead had a deficit and that their operating expenses exceeded their revenue, and because this mileage prorate of interstate revenue takes revenues which belong in Wisconsin and Washington in order to meet their terminal expenses and other higher costs and allocates them to North Dakota we have the result as shown on Exhibit L. If a proper allocation of the interstate revenues were made it would show a much smaller net revenue per mile in North Dakota than on the balance of the system.

278

Referring to Mr. Baker's testimony in connection with Exhibit M that tons originated per mile is not a proper factor for allocation of system value and should never be used, I agree with Mr. Baker in that respect and we have not attempted to use any such average as an indication of value or as an allocation factor.

As to my purpose in offering Exhibit 13 which compares ton miles per mile originated in North Dakota and on the balance of the system, I will say that if I understand the testimony of defendants in this case correctly, the contention has been made that the branch lines in North Dakota are entitled to some special credit because of the freight that they originate and deliver to the main line for transportation over the lines of the system and my Exhibit 13 was prepared solely for the purpose of showing that North Dakota tracks originate

less tons per mile than the balance of the system. I do not believe that the tonnage originated throws any light upon the value of the tracks or that it should be used as a factor in allocation or that any track should be given a special credit for originating tons, and I introduced Exhibit 13 merely to show that if any special credit is to be given to the tracks for originating tonnage, the balance of the system is entitled to more credit on this account than the tracks in North Dakota.

279 Referring to Mr. Baker's criticism of my including Washington import tonnage on Exhibit 13 as originating in Seattle but which really originated in China and Japan, if on the one hand North Dakota is to receive special consideration for originating the traffic that it originates, I see no reason why Washington should not be given credit for the tonnage it originates, whether it originates in the City of Seattle or at the docks in Seattle, or for that matter whether it is received from a connecting line in the State of Washington where we do receive vast quantities of freight. Every ton of freight so originated or received contributes materially to the system earnings and to my mind if there is anything in this argument about the origination of traffic, then I see no reason why the export and import traffic or the import traffic should be eliminated. If as I now understand Mr. Baker's testimony, he says that the traffic originated is immaterial, why I say as I did before that I thoroughly agree with him and there is no further point to these exhibits.

Referring to Mr. Baker's suggestion that if a comparison of this sort is to be made at all, the Washington import tonnage and also the ore tonnage should be disregarded, my recollection is that he said if you throw out the whole state of Washington and throw out the whole State of Minnesota then North Dakota would show a higher figure. So far as the ore traffic is concerned, it undoubtedly is traffic that moves at a lower revenue per ton, if that is to be the measure rather than the average ton on the system. On the other hand, the import traffic moves at a higher revenue per ton, and if there is any weight to be given to the revenue produced by the tons, then the ore tons would have to be decreased but the import tons increased. In any event, if these adjustments, all of them, were made, North Dakota would still originate
280 much less traffic per mile measured by value than the balance of the system.

Referring to Exhibit N on which Mr. Baker develops the various allocation factors, I pointed out on my direct testimony that the track mileage factor, which is item 4 on Exhibit N, gives no credit to the other states for the expensive

terminals, shops and mountain construction and ignores the fact that the average mile of road outside of North Dakota has twice as much physical property and twice as much railroad plant in it as a mile in North Dakota as testified to by Mr. Bowen. The car and locomotive miles, item 1, on Exhibit N, treat a car mile or a locomotive mile over a cheap track in North Dakota as though they performed as valuable a service as a mile of movement over a track of double that value in other states. In addition to this they treat a locomotive mile on a branch line in North Dakota, handling possibly 200 tons in the train, the same as a locomotive mile handling fifty times as much tonnage on the Minnesota ore lines. They give the same weight to a car mile in North Dakota handling sixteen tons per loaded car as is given to the cars on the balance of the system averaging twenty-five to twenty-eight tons per car. They treat a ton mile or a passenger mile in item 2, in North Dakota as equal to one requiring twice as much plant on the balance of the system. They also fail to credit to other states the ton miles, car miles and locomotive miles made over the terminal tracks located within those states, although those tracks are more costly and more valuable on the average. The total operating revenue factor, item 3, is also too large for North Dakota, because it includes a mileage prorate of the interstate revenue. The physical factor, the last one, ICC cost of reproduction new is a fair measure of the amount of the railroad plant in North Dakota compared with the rest of the system, but when
281 you make up the five factor allocation and four of the factors are based on these other traffic movement averages, which run from six to twenty per cent in North Dakota, then the inclusion of the 14% physical property with the weight of one-fifth has very little effect on the composite average, the other four factors smothering it off as it were, and raising the factor applicable to North Dakota.

You will note on Exhibit N the last block of ratios cover the physical property and is headed "I. C. C. Cost of Reproduction, less depreciation" and so forth. For the years 1929 to 1932, the figures used are the cost of reproduction less depreciation, but for the year 1933 the ICC value new was raised instead of the ICC value less depreciation and that increases the percentage assigned to North Dakota by nearly one-half of one per cent. The year 1933, which is the assessment year again and refers to the calendar year operations of 1932, is the only year in which the higher figure is used, thereby decreasing the apparent over assessment in the State of North Dakota for that year.

Exhibit P includes full allowance for all of the inaccuracies that I have been discussing in these previous exhibits. In

column 1 it uses a stock and bond value for the five year average, which gives as much weight to prices five years ago as to current prices. If a three year period were used instead of a five year period, by reference to Exhibit 22 it will be found that the reduction in the stock and bond value would approximate $46,000,000, that is the system value as so measured, and referring to that portion that relates to the operating property. The second column on Exhibit P shows capitalization of earnings, also using a five year figure, which includes $63,000,000 of boom year earnings for two years four and five years ago, and about $36,000,000 during the last three years covering the present economic period. If even
282 one of these boom years were excluded and an average for four years used instead of a five year average, it would reduce the system value when capitalized net at 6% by $47,400,000. I believe that a 7% rate is as low a rate as can possibly be justified at the present time and in 1932, and referring again to Exhibit 22, it can be shown that if 7% were used it would decrease the system value based on the net railway operating income capitalized at 7% by another $40,700,000. If all three of these changes were made and net effect on the average of the stock and bond value and the capitalized value would be a total decrease of $68,000,000, the figures shown in the third column of Exhibit P. This reduction in system value of $68,000,000 would decrease the North Dakota value by $12,700,000 using the allocation basis advocated by the defendant in block 4, Exhibit P, on the so-called five factor basis, and that would show an over-assessment of $28,100,000 or about 55%. However, I believe that this factor of allocation is far too high for reasons that I have previously stated, and if the allocation were made according to the computations in my Exhibit 12 it would cut off another $17,000,000 in North Dakota value, or if my allocation were averaged with Mr. Baker's, the total reduction in the amount assigned to North Dakota would be $21,200,000 and the over-assessment would be $36,700,000, always referring to the year 1932, which is an 87% over-assessment instead of the 24.52% shown on Exhibit P, block 4.

When I say "always referring to the year 1932" I mean the 1933 assessment year or the 1932 operating year. That is, my testimony is not going to the other years as shown on this exhibit. As it stands now Exhibit P, Block 4, shows an over-assessment in 1932 of 24.52%, and if any one of the corrections that I have indicated were made it would greatly increase this over assessment.

283 Exhibits R, S and T are on the so-called Balch method, but the system value items a, b and c are the

same as those developed on the other exhibits by the defendant and subject to the same criticism. This estimate gives the same weight to stock and bond prices of five years ago that it gives to the prices today and apportions them between railway operating and non-operating property partly in proportion to the investment, which I think is erroneous for reasons which I have stated. It capitalizes the five years earnings, nearly two-thirds of which were earned in the boom years of four and five years ago and uses only a six per cent rate for capitalization when the going rate was much higher. One of my exhibits shows that at this very time the yield to maturity on Great Northern bonds was nearly eleven per cent. Of course, the yield on stock demanded by investors would be still higher. The method of allocating system value to the states by the so-called Balch method differs but slightly from some of the methods used in Exhibit P and is subject to the same criticisms which I have mentioned in connection with that exhibit. It apportions the operating revenues, ton miles and passenger miles, car and locomotive miles on the miles of track operated basis when the basic information is based on the miles of road operated. In spite of these objections Exhibit T shows that for the year 1933 by the Balch method the ratio of the assessment to the assigned value was an overassessment of 19.31%.

The criticisms of the method of using traffic units and operating units per mile of all track instead of per mile of road, which I made in connection with Exhibits J, K and L, would likewise apply to Exhibits R, S and T. The same basis is used but in a slightly different form.

284 Mr. Dorety: May I ask whether the court has reached a conclusion about admitting the farm income exhibits U to Z-1?

The Court: I think the best thing for this court to do is to overrule the objection and leave the exhibits there for what they are worth. They might mean something different to some other court than they do to me and if that situation requires some counter showing by the plaintiff in the case I will probably permit it; so the objection at this time will be overruled.

Mr. Dorety: And will the court allow me an exception?

The Court: Yes, I will allow you an exception, certainly.

(Whereupon the witness continued to testify as follows):

In connection with these exhibits U to Z and Z-1, it was stated that the use of the gross income and cash income was

not used as an indication of value but to measure the changes in value. I have no knowledge as to the farm income but I do know that the changes in gross revenue of the railroads do not reflect even an approximate measure of the changes in value. The gross revenues of the Great Northern Railway Company in 1929 were nearly $126,000,000, and it dropped in 1932 to something over $55,500,000. The year 1932 was approximately 44% of the 1929 figure as measured by the gross revenues, but during the same period the net railway operating income, which is the revenues less expenses, taxes and some small items but not excluding bond interest, and is the amount available for paying bond interest and dividends, the net railway operating income declined from $32,000,000 to approximately $1,000,000, the decline, the 1932 figure being 4% of the 1929 net, whereas it was 44% of the gross. In other words, the decline in net was eleven times as much as the decline in gross. The value of a railroad property is determined entirely by its net earnings and not at all by its gross revenue, and the changes in value should be measured by the changes in net and not by changes in gross. I
285 assume that the same thing is true as to farm property but these exhibits throw no light upon the farm net income and, therefore, afford no basis of comparison between farm property and railroad property even as to change in value. If Mr. Baker is correct in stating that the changes in the value of farm property are measured by the gross income and if I am correct, as I believe that I am, in stating that the changes in value of railroad property are measured by the changes in its net, then it would be more logical to compare the gross farm income with the net railway operating income, just for the purpose of reflecting changes in value.

I have prepared such a comparison as that and the statement is marked Plaintiff's Exhibit 23. The figures on that are correct and correctly show what they purport to show. The figures I had available for the railway operations covered only the last five years, so that I have taken the upper part of Plaintiff's Exhibit 23 from Defendant's Exhibit U for the years 1928 to 1932, inclusive. Defendant in Exhibit U or corresponding to the lower portion of Exhibit 23, used the total operating revenues for the Great Northern, whereas I have used in the first column on the lower half of this sheet the net operating revenues after taxes in the State of North Dakota. Now these net operating revenues shown here are the gross operating revenues, assigning the interstate revenue on a mileage prorate less operating expenses and taxes, not that the revenues so assigned are accurate but merely for illustration purposes. If a correct ascertainment of the

net operating revenues were shown the figures for 1932 for the State of North Dakota would show a deficit after taxes. In any event, the last column in the lower half of the sheet shows the ratio of assignment of the net revenues of the Great Northern in the State of North Dakota and that it increased from 899% in the year 1928 to 13556% in the
286 year 1932, whereas the figures based on the gross income from farm production and the cash income from farm production compared with assessment of farm real and personal property in the upper part of Exhibit 23, taken from Defendants' Exhibit U, shows an increase from around 370% to 400% in 1928 to 1000% or 1200% in 1932. In the case of the farm property, the 1932 per cent shown in the last column was about four times the 1928 per cent and in the case of the railroad property the 1932 per cent shown in the last column is something like fifteen times 1928 and is so shown in items 1, 2 and 3 at the foot of Exhibit 23.

(The document marked "Plaintiff's Exhibit 23" was offered and received in evidence and is included herewith as Plaintiff's Exhibit 23).

Reference by counsel for the State to the method of allocation shown in Exhibit 12, as being a method of allocating system value to states in proportion to cost of service, is not a correct description of my method. There has been a rather confusing use of terms to apply to my Exhibit 12 and the facts are that Exhibit 12, sheet 2, is an assignment of the interstate revenue to states on the basis of the cost of service. It has nothing whatever to do with the value of the property in the states as such and it is not so used. Having assigned the system interstate revenue to states it is a simple matter then to obtain the net applicable to the state by subtracting the operating expenses and other deductions from the total revenues, including the intrastate and a proportion of the interstate to get the net assignable to the state, and the proportion of net of the system earned in North Dakota is then used as the factor representing the proper allocation of system value to North Dakota. It is not an attempt to allocate value to North Dakota or any other state on a basis of cost of service and it is not contended that the state that has the higher cost, therefore, has the higher value.

287 Referring to Mr. Baker's statement that my method of allocation of interstate revenue as shown in Exhibit 12 assumes the idealistic in which all rates are based on cost of service plus a fair return and that it also assumes that the rate of return is uniform in every case, that is not a fair statement in regard to my method.

If you will refer to Exhibit 11 I think I will show that that is not so. In Exhibit 11 I have illustrated what I believe to be a proper division of an interstate rate which is sufficiently high to pay all operating expenses and a four per cent return. The same illustration would hold good if I had used a one per cent return or a ten per cent return or any other return. We may have some rates that pay an extremely small return and others that pay an extremely large one, but in any case they are equally susceptible to allocation between states in proportion to the operating expenses and the cost of the plant used in producing the service. Even if it should happen that some rate pays less than the full operating expenses with no return whatever I still believe that the total revenue should be allocated between states in proportion to the cost of service in order that each state might share proportionately in the loss.

Referring to Mr. Baker's statement that my method made no difference between high grade and low grade traffic or between high revenue and low revenue traffic, it is true that I have not segregated different classes of traffic, but in the case of North Dakota I have considered the total interstate traffic passing into or through the State as a whole. However, this includes all of the high grade traffic as well as all of the low grade traffic and in approximately the same proportion for North Dakota as for the system as a whole for the reason that North Dakota is near the center of the system and shares in practically all of the through traffic on the system with
288 the possible exception of the coal movement, largely confined to Minnesota, and the iron ore movement in Minnesota and Wisconsin. As to these, I pointed out that by excluding the Mesabi Division where that traffic is handled, the percentage allocated to North Dakota would be slightly reduced, and that by including the coal and ore traffic in the total for the system I have slightly favored North Dakota.

Referring to Mr. Baker's statement that my method was a denial of all facts as to geographical situations, I would say that exactly the contrary were so. The mileage prorate in allocating interstate revenue is a denial of all geographical situations as it regards every mile, wherever situated, as identical, whereas the fundamental purpose of my whole method is to give full effect to the geographical and physical situation, which are all reflected in the cost of service.

Referring to Mr. Baker's criticism that I throw all interstate revenue into one jackpot and assign to Washington and other western states a portion of the revenue on North Dakota-Minnesota traffic, I would say that that statement is

not correct. The total volume of the traffic between North Dakota and Minnesota is shown by the ton miles in those states and the entire ton miles made in that traffic are credited to North Dakota and Minnesota, none of it is credited to Washington or Idaho. I only credit to Washington and Idaho the ton miles actually made in those states. While the ton miles in Idaho and Washington are more expensive than those in Minnesota and North Dakota, the revenue received from those ton miles is correspondingly higher as testified to by Mr. Beidelman, and these revenues as well as the ton miles are thrown into the system revenue before making the apportionment. However, the volume of traffic moving only
289 between Minnesota and North Dakota, while substantial in itself, is relatively small as compared with the traffic moving all the way through North Dakota from East to West, and moving from Minnesota or beyond on the East and into Montana or beyond on the West. In the first place, the mileage made in North Dakota on this transcontinental traffic is two and a half times as long as the mileage made on the traffic originating and terminating within the State of North Dakota, and, therefore, it would take two and one-half tons of originating traffic to equal one ton of trans-state traffic as far as the ton miles produced in North Dakota is concerned. Now the tons originating and terminating in North Dakota are not two and one-half times as much as the trans-state tons, so that in the final analysis a little over 25% of the total ton miles made in North Dakota is on ton miles originating or terminating in that state and originating or terminating in Wisconsin and Minnesota both. The larger part of the North Dakota-Minnesota traffic consists of grain and the rates on this traffic are the lowest grain rates in the United States. The Canadian lines established very low grain rates by agreement with the Government in consideration of certain land grants and the Great Northern was forced to compete with these low Canadian rates at border points where North Dakota joins Canada, the Great Northern operations extending into Canada, which has the effect of lowering the rate structure on grain to all that upper section of North Dakota, with a result that the grain rates from North Dakota to Minnesota are much lower than the grain rates for corresponding destinations on any of the railroads to the south of the Great Northern into the primary markets. In view of the comparatively low revenues on that traffic, I think that North Dakota would not be hurt very much by having that revenue credited over the system with
290 other revenues.

As to the difference between the method used in Exhibit 12 and the method of prorating the revenue on

each individual shipment as illustrated in Exhibit 11, I would say that if we could take every individual shipment on the system and prorate it between the states where that shipment actually moves in proportion to the cost of service I think the result would not vary from my result by over a fraction of one per cent, and I base that opinion on all of the testimony that I have given heretofore, that North Dakota being one of the central states of the system with such a large volume of trans-state traffic of the same character as the general interstate traffic for the system, that such a treatment as you have suggested could have very little difference in the final result.

As to how the greatest possible variation that could occur in my method would compare with the errors which are necessarily involved in the five factor allocation used by the State of North Dakota, the method used by the state based on the apportionment of interstate revenue between states on a mileage prorate produces results that in themselves are grotesque and absurd and condemn that method. In some years it shows deficits in four or five states and provinces while showing high profits in others. It would spread the high terminal values in Superior, the Twin Cities and Puget Sound over the interior states and produce an exaggeration or distortion by producing an allocation factor for North Dakota that is approximately 50% too high. On the other hand, I do not believe that any correction which could properly be made in my exhibit 12, by using the most detailed study, would raise the percentage of 12.22% shown in Exhibit 12 to more than say 13% or less than 11½%.

As to the suggestion that North Dakota should have a higher value per mile than other states because of her low operating expenses, my exhibit 12 gives full recognition to the
291 lower operating expenses in North Dakota. As I stated, the purpose of page 2 of that exhibit is, first, to assign to North Dakota a correct proportion of the interstate freight revenue and having done that I then subtract the operating expenses actually incurred in the state. The mere fact that the operating expenses are low results in an increased net in the state, a net that is higher than it would be if the operating expenses were higher than they are, so that full recognition of the low operating cost in North Dakota is given in the net income before taxes on page 1 of Exhibit 12.

As to the suggestion that North Dakota should have a higher prorate of interstate revenues because her operating expenses are lower than those of terminal states, my whole develop-

ment on page 2 of Exhibit 12 goes to the error of making an apportionment on a prorate basis, thereby assigning revenues to the state of North Dakota where they are not needed to pay operating expenses and taking away from the terminal states revenues needed for paying their operations, resulting in a deficit being shown in those states and a high profit in North Dakota on the same shipment made on an over-all rate.

LYMAN BAKER, recalled by the defendants in sur-rebuttal testified as follows:

Direct Examination.

By Mr. Shaft:

Referring to the fact that in Exhibit N, in giving the valuation of the physical property for the years 1929, 1930, 1931 and 1932, I used the I. C. C. cost of reproduction less depreciation, plus additions and betterments as of the end of the year preceding the assessment years, whereas in 1933, I have used the I. C. C. valuation new without deductions, I will say that in all previous years in the tax reports of the Great Northern Railway Company showed the I. C. C. cost of reproduction, less depreciation. The report made in 1933
292 for the year ending December 31, 1932 showed I. C. C. valuation new and did not contain information as to the depreciated value. At the time I made up this table, I did not have that information or rather I secured it after I had a large part of my exhibits made up, and I did not make any change. That was information which was not presented to the Tax Commissioner for 1933.

Cross-Examination.

By Mr. Dorety:

I would agree on principle that the last line in Exhibit N should be changed from 14.32 to 13.85%. If the physical property factor is to be used, it should be the depreciated value. That would make my five factor average 18.25% instead of 18.34% as shown on Exhibit P, and if Mr. Turnburke's Exhibit 22 is to correctly show my position, the last figure should read 18.25 instead of 18.34%, on the five factor method, although I don't believe that I committed myself to the five factor method.

(At this point the defendant concluded its direct testimony and rested its case).

Whereupon, it was stipulated between the parties that the plaintiff's report to the State Tax Commissioner for 1933

is on an official form prescribed by the Commission and that it calls attention to the Statute of North Dakota requiring the railroad company to make its books and records accessible to the taxing officers, and that among other data which it requires the railway company to furnish was track mileage figures for the state and the system, car and locomotive figures, ton mile and passenger mile figures, gross revenue and physical valuation.

The Court: Let the record show on motion of the plaintiff the rest is withdrawn for the purpose of the stipulation
293 that is now in the record, and that defendants' rest be withdrawn for the purpose of offering Exhibit Z-2, and now having been received in evidence both sides rest.

Thereupon, the case was argued orally with the court both as to the law and the facts on behalf of both parties, and the court took the case under consideration and thereafter rendered its judgment.

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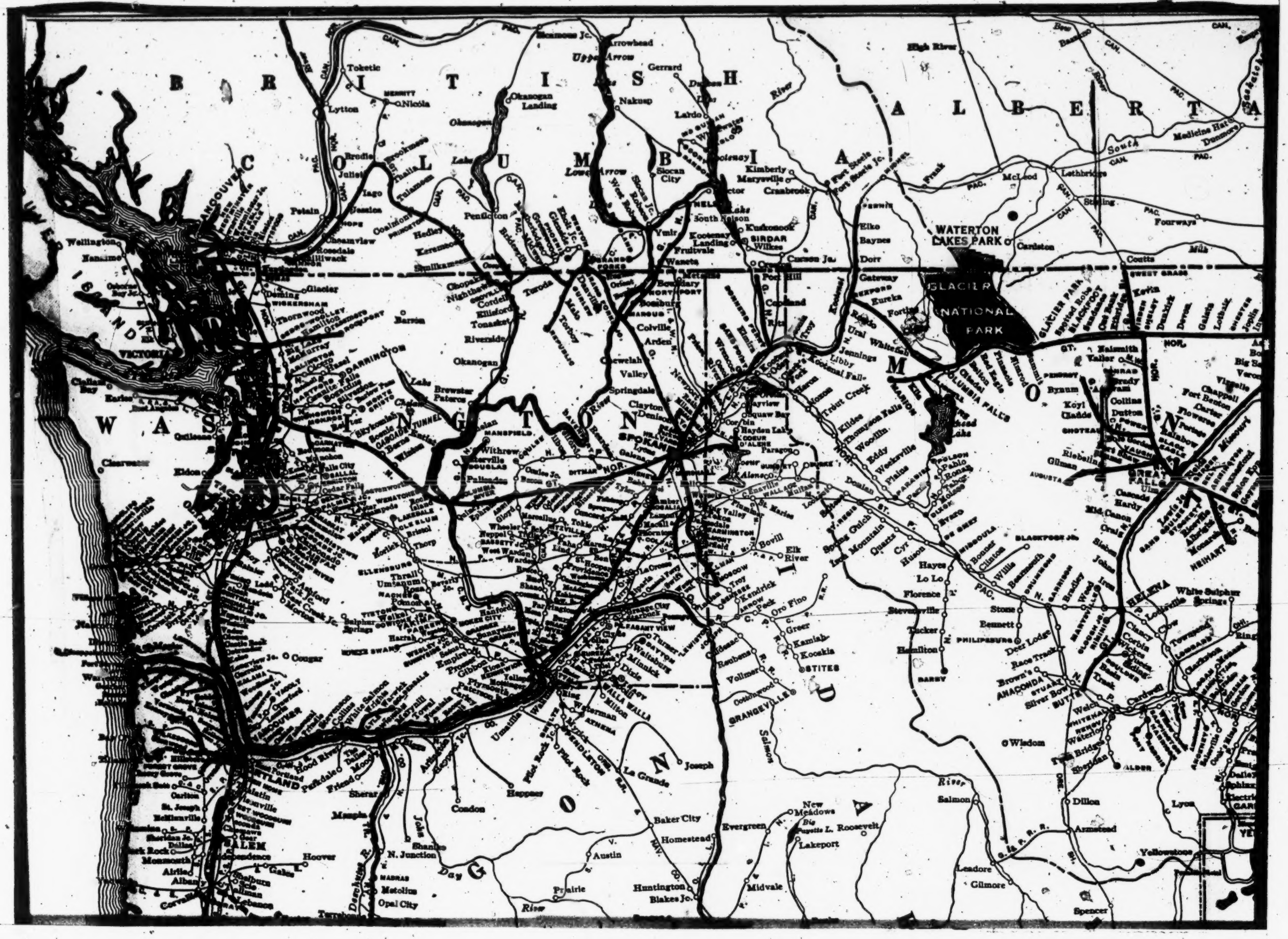
Plaintiff's Exhibit 1

Great Northern Railway Company

Year Ended		Passengers	Revenue per Passenger Mile (Cents)	L. C. L. Tons
June 30,	1909	7,138,742	2.240	630,027
"	1910	8,282,440	2.205	720,954
"	1911	8,362,189	2.273	719,553
"	1912	8,168,364	2.487	759,848
"	1913	8,595,073	2.503	867,879
"	1914	9,199,259	2.336	928,495
"	1915	8,468,317	2.289	878,893
December 31,	1916	8,168,937	2.360	978,188
"	1917	8,382,035	2.374	969,719
"	1918	7,264,346	2.608	838,831
"	1919	8,350,661	2.784	823,697
"	1920	8,538,912	3.000	899,668
"	1921	6,194,676	3.442	646,365
"	1922	5,509,459	3.358	645,326
"	1923	4,975,800	3.326	636,309
"	1924	3,940,656	3.240	585,485
"	1925	3,642,749	3.161	615,661
"	1926	3,081,457	3.185	588,690
"	1927	3,108,427	3.175	587,666
"	1928	2,512,026	3.124	595,613
"	1929	2,276,069	3.070	592,642
"	1930	1,694,437	3.082	458,089
"	1931	1,070,044	2.800	372,218
"	1932	845,213	2.400	273,160
"	1933	876,841	1.991	261,503

Accounting Department,
Office of Comptroller,
September 24, 1934.


BRITISH COLUMBIA
ALBERTA
WASHINGTON
OREGON
IDAHO
MONTANA
Vancouver
Victoria
Seattle
Tacoma
Spokane
Portland
Salem
Eugene
Boise
Helena
Great Falls
Butte
Missoula
Lethbridge
Medicine Hat
Calgary
Edmonton
Kamloops
Nelson
Cranbrook
Fernie
Revelstoke
Penticton
Okanogan
Wenatchee
Yakima
Walla Walla
Lewiston
Pullman
Moscow
Coeur d'Alene
Kellogg
Wallace
Missoula
Kalispell
Whitefish
Glacier National Park
Waterton Lakes Park
Columbia Falls
Bonner
Hamilton
Dillon
Bozeman
Livingston
Billings
Miles City
Havre
Lewistown
Fergus
Judith
Big Sandy
Valier
Shelby
Cut Bank
Conrad
Kevin
Sunburst
Galata
Lothair
Devlin
Dunkirk
Coutts
Milk
Fourways
Stirling
Taber
Coaldale
Lethbridge
Fort Steele
Kimberley
Marysville
Slocan City
Kaslo
Nakusp
Arrowhead
Gerrard
Lardo
Duncan
Okanagan Landing
Vernon
Kelowna
Penticton
Princeton
Merritt
Nicola
Lytton
Toketic
Brodie
Juliet
Tago
Ossoyoos
Oroville
Molson
Chesaw
Curlew
Republic
Kettle Falls
Colville
Arden
Valley
Springdale
Clayton
Deer Park
Spokane
Hayden Lake
Coeur d'Alene
Paragon
Wallace
Mullan
Kellogg
Osburn
Wardner
Bovill
Elk River
Troy
Moscow
Pullman
Colfax
Palouse
Genesee
Uniontown
Endicott
Rosalia
Tekoa
Oakesdale
Garfield
Farmington
Steptoe
Lacrosse
Pullman
Moscow
Lewiston
Asotin
Clarkston
Dayton
Waitsburg
Prescott
Walla Walla
Milton
Athena
Weston
Pendleton
Hermiston
Umatilla
Boardman
Arlington
Heppner
Condon
Fossil
Shaniko
Madras
Metolius
Opal City
Prineville
Redmond
Bend
La Pine
Crescent
Chemult
Klamath Falls
Malin
Tulelake
Dorris
Yreka
Weed
Mt. Shasta
Dunsmuir
Sisson
Grants Pass
Medford
Ashland
Roseburg
Eugene
Albany
Corvallis
Salem
Oregon City
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Vancouver
Longview
Kelso
Centralia
Chehalis
Tacoma
Puyallup
Auburn
Kent
Seattle
Everett
Bellingham
Blaine
Sumas
Abbotsford
Mission
New Westminster
Vancouver
North Vancouver
Squamish
Whistler
Pemberton
Lillooet
Ashcroft
Cache Creek
Kamloops
Chase
Salmon Arm
Sicamous
Revelstoke
Golden
Field
Lake Louise
Banff
Canmore
Cochrane
Calgary
Bassano
Brooks
Medicine Hat
Suffield
Redcliff
Irvine
Bow Island
Foremost
Manyberries
Coutts
Sweet Grass
Carway
Cardston
Glenwood
Pincher Creek
Crowsnest
Blairmore
Frank
Coleman
Bellevue
Hillcrest
Fernie
Michel
Sparwood
Elkford
Natal
Corbin
Elko
Baynes
Dorr
Gateway
Eureka
Rexford
Jennings
Libby
Troy
Yaak
Rexford
Eureka
Fortine
Whitefish
Kalispell
Columbia Falls
Hungry Horse
Coram
West Glacier
Belton
Glacier National Park
Apgar
Polebridge
Waterton Lakes Park
Cardston
Magrath
Raymond
Stirling
Coalhurst
Lethbridge
Monarch
Fort Macleod
Granum
Claresholm
Nanton
Vulcan
Carmangay
Champion
Barons
Lomond
Milo
Vauxhall
Taber
Grassy Lake
Coutts
Sweet Grass
Del Bonita
Wildhorse
Aden
Manyberries
Foremost
Orion
Bow Island
Irvine
Medicine Hat
Redcliff
Suffield
Bassano
Brooks
Tilley
Gem
Rosemary
Scandia
Carseland
Strathmore
Cheadle
Langdon
Chestermere
Calgary
Airdrie
Crossfield
Beiseker
Three Hills
Trochu
Linden
Acme
Carbon
Drumheller
Rosedale
Hanna
Oyen
Consort
Veteran
Castor
Coronation
Stettler
Big Valley
Botha
Innisfail
Penhold
Red Deer
Lacombe
Blackfalds
Bowden
Olds
Didsbury
Carstairs
Crossfield
Airdrie
Cochrane
Calgary
Banff
Canmore
Exshaw
Lake Louise
Field
Golden
Revelstoke
Sicamous
Salmon Arm
Chase
Kamloops
Ashcroft
Cache Creek
Lillooet
Pemberton
Whistler
Squamish
North Vancouver
Vancouver
New Westminster
Mission
Abbotsford
Sumas
Blaine
Bellingham
Everett
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Tacoma
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Roseburg
Grants Pass
Medford
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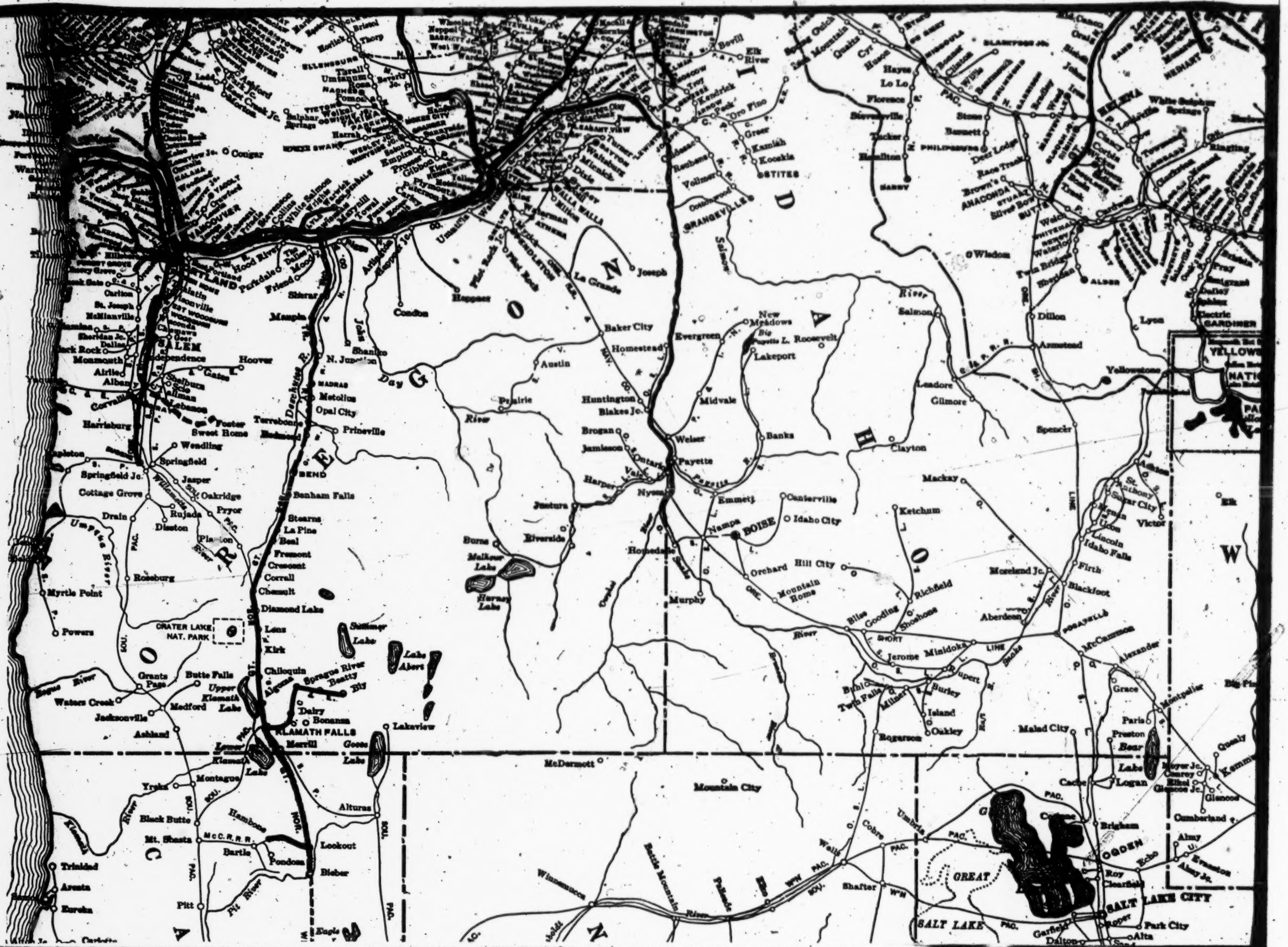
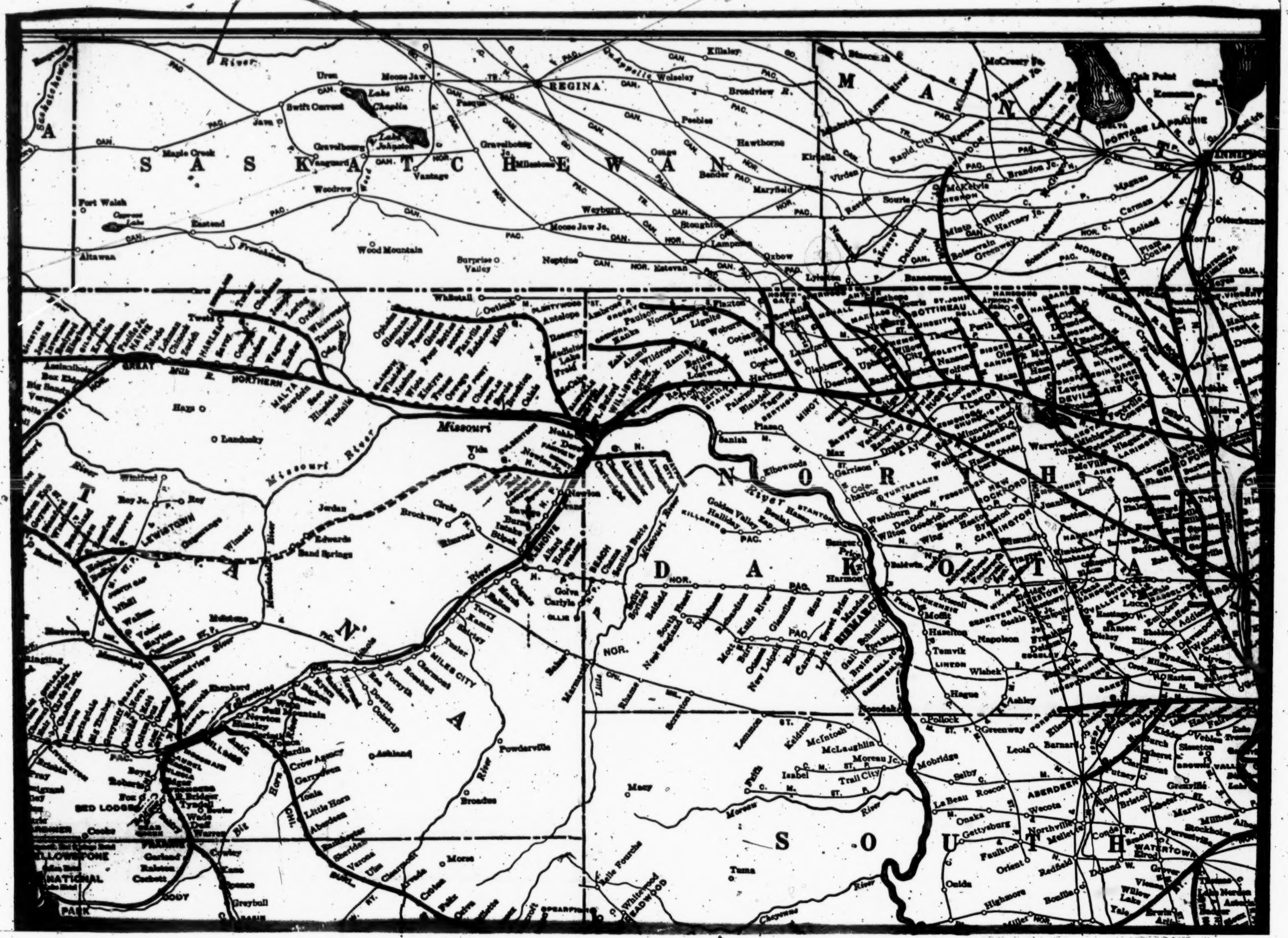
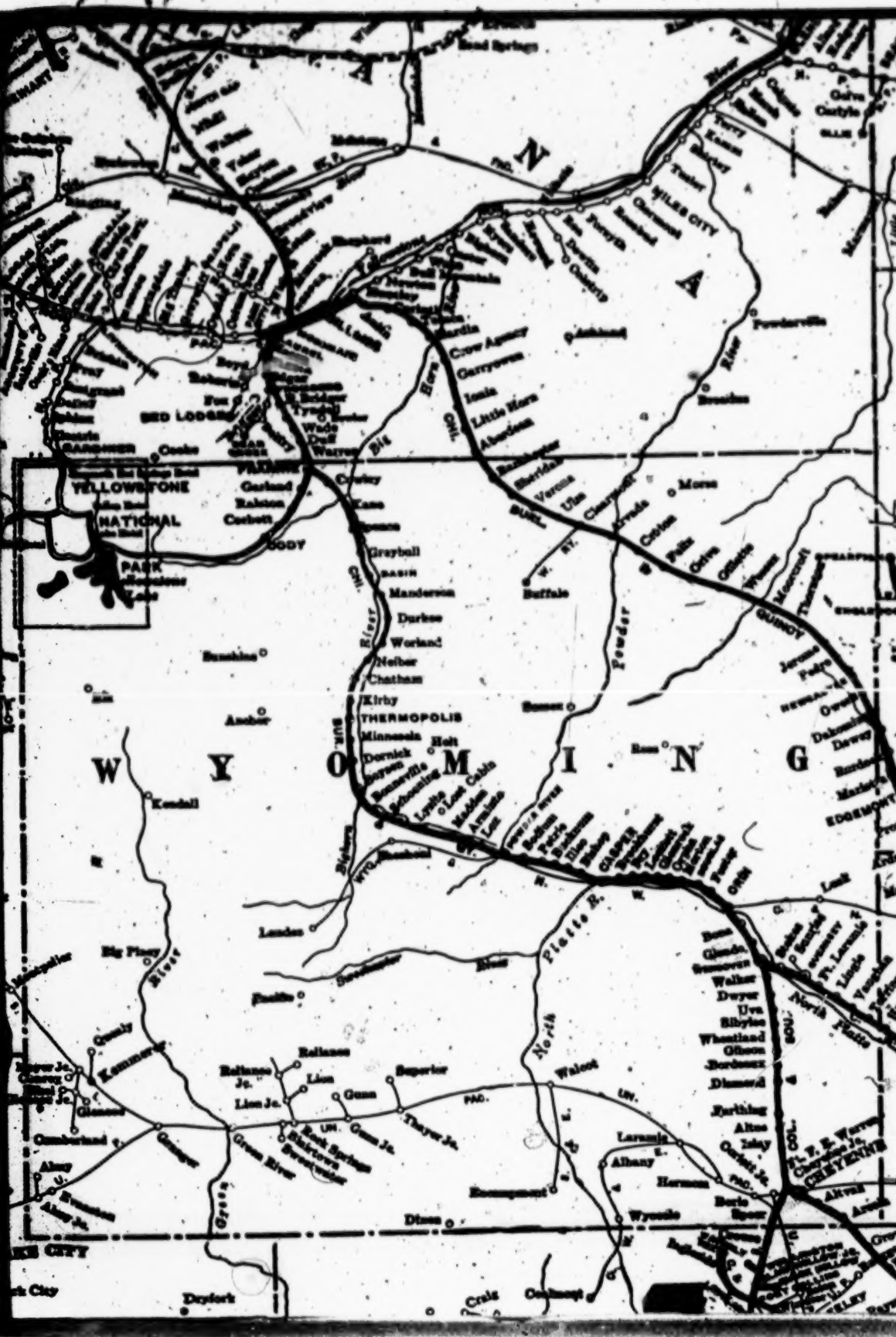
Yreka
Dunsmuir
Mt. Shasta
Weed
Sisson
Dorris
Tulelake
Malin
Klamath Falls
Chemult
Crescent
La Pine
Bend
Redmond
Prineville
Madras
Metolius
Opal City
Shaniko
Antelope
Fossil
Condon
Heppner
Arlington
Boardman
Hermiston
Pendleton
Weston
Athena
Milton
Walla Walla
Prescott
Waitsburg
Dayton
Starbuck
Pomeroy
Garfield
Farmington
Steptoe
Lacrosse
Pullman
Moscow
Lewiston
Asotin
Clarkston
Uniontown
Endicott
Rosalia
Tekoa
Oakesdale
Colfax
Palouse
Genesee
Troy
Moscow
Bovill
Elk River
Wallace
Mullan
Kellogg
Osburn
Wardner
Coeur d'Alene
Hayden Lake
Paragon
Spokane
Deer Park
Clayton
Springdale
Valley
Chewelah
Arden
Colville
Kettle Falls
Republic
Curlew
Molson
Oroville
Tonasket
Riverside
Okanogan
Omak
Brewster
Pateros
Chelan
Manson
Wenatchee
Cashmere
Leavenworth
Peshastin
Dryden
Cle Elum
Roslyn
Ellensburg
Thrall
Vantage
Beverly
Ephrata
Soap Lake
Coulee City
Wilbur
Creston
Davenport
Reardan
Odessa
Harrington
Sprague
Cheney
Medical Lake
Fairfield
Rockford
Latah
Tekoa
Oakesdale
Tekoa
Rosalia
Endicott
Uniontown


PORTLAND
SALEM
Hillsboro
Forest Grove
Newberg
Carlton
St. Joseph
McMinnville
Sheridan Jct.
Dallas
Monmouth
Airlie
Albany
Corvallis
Harrisburg
Lebanon
Sweet Home
Foster
Gates
Hoover
Scio
Shelburn
Gilman
Independence
Wendling
Springfield
Springfield Jct.
Cottage Grove
Drain
Oakridge
Rujada
Pryor
Disston
Plainton
Roseburg
Myrtle Point
Powers
Coos River
Umpqua River
Willamette River
Tillamook
Astoria
Seaside
Cannon Beach
Hood River
The Dalles
Moro
Shaniko
Antelope
Heppner
Condon
Arlington
Boardman
Umatilla
Hermiston
Pendleton
Pilot Rock
Athena
Walla Walla
Milton
Dixie
Wallula
Prosser
Grandview
Sunnyside
Toppenish
Wapato
Yakima
Ellensburg
Thrall
Thorp
Cle Elum
Roslyn
Easton
Bristol
Harlock
Vantage
Beverly
Othello
Connell
Ritzville
Warden
Moses Lake
Wilbur
Creston
Davenport
Reardan
Odessa
Ephrata
Soap Lake
Coulee City
Wenatchee
Entiat
Chelan
Lake Chelan
Stehekin
Leavenworth
Cashmere
Peshastin
Dryden
Monitor
Cashup
Winthrop
Twisp
Carlton
Methow
Pateros
Brewster
Bridgeport
Orondo
Waterville
Douglas
Mansfield
Coulee City


SASKATCHEWAN
MANITOBA
NORTH DAKOTA
SOUTH DAKOTA
REGINA
Moose Jaw
Swift Current
Maple Creek
Fort Walsh
Altawan
Eastend
Gravelbourg
Vanguard
Vantage
Woodrow
Wood Mountain
Surprise Valley
Neptune
Ormiston
Weyburn
Moose Jaw Jc.
Stoughton
Lampman
Oxbow
Estevan
Wolseley
Broadview
Peebles
Hawthorne
Osage
Bender
Maryfield
Kirkella
Virden
Souris
Rapid City
Brandon
Brandon Jc.
Portage La Prairie
Minnedosa
Carman
Roland
Morden
Winkler
Morris
Emerson
Letellier
Altamont
Hilton
Hartney Jc.
Melita
Bolissevain
Greenway
Deloraine
Lyleton
Arrow River
Whitetail
Outlook
Antelope
Flaxton
Lignite
Williston
Wildrose
Alamo
Zahl
Ambrose
Fortuna
Noonan
Larson
Coteau
Coplen
Hartness
Wheelock
Epping
Battleview
Lostwood
Stanley
Palermo
Blaisdell
Tagus
Berthold
Mohall
Sherwood
Lansford
Bottineau
Westhope
Newburg
Maxbass
Souris
Willow City
Bisbee
Dunseith
Rolla
Perth
Omemee
Nanson
Wolford
Deering
Upham
Towner
Granville
Sherwood
Glenburn
Minot
Burlington
Surrey
Sawyer
Velva
Foxholm
Voltaire
Max
Garrison
Elbowoods
Makoti
Coleharbor
Turtle Lake
Mercer
Washburn
Wilton
Goodrich
Denhoff
Bowdon
Heaton
Wing
Harmon
Baldwin
Sanger
Price
Golden Valley
Halliday
Killdeer
Stanton
Hazen
Beulah
Zap
Dodge
Dickinson
Belfield
Medora
South Heart
New England
Richardson
Mott
Bison
Odanah
Hettinger
Scranton
Reeder
Gascoyne
Bentley
Glenullin
Slope
Sweet Briar
Mandan
Bismarck
Schmidt
Fort Rice
Gale
Breien
Thompson
Hall Jct.
Gardena
Hall
Haseltine
Napoleon
Temvik
Linton
Wishek
Hague
Ashley
Pollock
Greenway
Leola
Barnard
Mobridge
Selby
Isabel
Trail City
Moreau Jc.
Lemmon
Kenmare
McIntosh
McLaughlin
Bowman
Rhame
Reeder
Marmarth
Little Mo.
Sentinel Butte
Beach
Glendive
Terry
Fallon
Baker
Keene
Miles City
Forsyth
Rosebud
Colstrip
Dorsey
Custer
Hysham
Huntley
Worden
Billings
Newton
Hunkey
Bull Mountain
Shepherd
Ballantine
Acton
Absarokee
Crow Agency
Garryowen
Lodge Grass
Little Horn
Custer
Crow Agency
Ashland
Powderville
Broadus
Mary
Tuma
Mosher
Cheyenne
Whitewood
Deadwood
Spearfish
Sturgis
Belle Fourche
Moreau
Missouri River
Yellowstone River
Little Missouri River
Big Horn River
Tongue River
Powder River
Musselshell River
Milk River
Judith River
Marias River
Teton River
Sun River
Dearborn River
Gallatin River
Madison River
Jefferson River
Beaverhead River
Big Hole River
Red Lodge
Bridger
Tyndall
Wade
Dell
Warren
Cooke
Parkins
Garland
Raleigh
Corbett
Greybull
Basin
Cody
Yellowstone National Park
Big Timber
Reed Point
Livingston
Gardiner
Emigrant
Pray
Clyde Park
Wilsall
Ringling
Logan
Manhattan
Belgrade
Bozeman
Three Forks
Whitehall
Ennis
Virginia City
Alder
Sheridan
Twin Bridges
Dillon
Lima
Monida
Armstead
Red Rock
Lakeview
Henry
Kilgore
Spencer
Ashton
Rexburg
Sugar City
St. Anthony
Idaho Falls
Roberts
Menan
Market Lake
Rigby
Ririe
Swan Valley
Irwin
Victor
Driggs
Tetonia
Teton
Felt
Dubois
Spencer
Kilgore
Hamer
Parker
Lewisville
Ucon
Shelley
Firth
Blackfoot
Aberdeen
Springfield
Pingree
Basalt
Moreland
Fort Hall
Pocatello
Inkom
Lava Hot Springs
Chesterfield
Arimo
Downey
Malad
Tremonton
Garland
Bear River
Great Salt Lake
Utah
Idaho
Wyoming
Montana
Nebraska
Minnesota
Manitoba
Saskatchewan
Alberta
Canada
U.S.A.


W Y O M I N G
A N A
Powder River
Big Horn
Little Horn
Tongue
Crow Agency
Garryowen
Lodge Grass
Busby
Ashland
Birney
Decker
Kirby
Sheridan
Dayton
Parkman
Story
Big Goose
Wolf
Dull Knife
Warren
Clear Creek
Greybull
Basin
Manderson
Worland
Hyattville
Meeteetse
Thermopolis
Hot Springs
Minnesela
Dorrick
Boysen
Riverside
Lysite
Lost Cabin
Arminto
Kaycee
Buffalo
Powder River
Barnum
Midwest
Edgerton
Kaycee
Casper
Bessemer
Evansville
Mills
Glenrock
Douglas
Converse
Orpha
Orin
Glendo
Guernsey
Wendover
Walcott
Whalen
Dwyer
Uva
Bluejoint
Wheatland
Gilchrist
Bordeaux
Diamond
Farthing
Altus
Isley
Cheyenne Jct.
Pine Bluffs
Albin
Hillsdale
Burns
Egbert
Laramie
Albany
Harmony
Rawlins
Walcott
Saratoga
Encampment
Riverside
Dixon
Wyarno
Baggs
Dixon
Creston Jct.
Cumberland
Gateway
Green River
Rock Springs
Blairtown
Superior
Lion
Lion Jct.
Rollins
Rollins Jct.
Thayer Jct.
Granger
Kemmerer
Quealy
Big Piney
Marbleton
Pinedale
Daniel
Boulder
Fort Bridger
Lyman
Evanston
Piedmont
Urie
Robertson
Mountain View
Lonetree
Hilliard
Verona
Utah
Cherokee
Arvada
Colona
Powderville
Moorcroft
Sundance
Hulett
Aladdin
Alva
Beulah
Reuter
Recluse
Gillette
Wright
Rozet
Moore
Dakota
Dewey
Barber
Madden
Edgemont
Lusk
Manville
Van Tassell
Lance Creek
Keeline
Shawnee
Orpha
Douglas
Converse
Glenrock
Bessemer
Evansville
Mills
Casper
Midwest
Edgerton
Kaycee
Buffalo
Powder River
Barnum

D A K O T A
S O U T H
D A K O T A
N E B R A S K A
PIERRE
ABERDEEN
ALLIANCE
NORTHPORT
STERLING
IMPERIAL
Trail City
Timber Lake
Mobridge
Faulkton
Redfield
Miller
Highmore
Blunt
Onida
Gettysburg
Mission
Winner
Dallas
Rosebud
Porcupine
Chamberlain
Stickney
Platte
Niobrara
Crofton
Spencer
Newport
Long Pine
Hemingford
Bridgeport
Oshkosh
Lisco
Broken Bow
Callaway
Ansley
Litchfield
Arnold
Merna
Burwell
Ericson
Greeley Center
Central City
Phillips
Fullerton
Edgar
Superior
Franklin
Red Cloud
Wauneta
Imperial
Chappell
Julesburg
Sidney
Potter
Dalton
Huntsman
Alden
Bridgeport
Lodge Pole
Sunol
Chalco
Lorton
Whitewood
Deadwood
Sturgis
Buffalo Gap
Hot Springs
Edgemont
Oelrichs
Hermosa
Custer
Keystone
Rapid City
Wasta
Cheyenne
Midland
Wall
Quinn
Scenic
Creighton
Norfolk
Meadow Grove
Madison
Wayne
Carroll
Pilger
Stanton
Norfolk
Tilden
Battle Creek
Oakdale
Plainview
Elgin
Neligh
Oakdale
Ewing
Atkinson
Stuart
Long Pine
Valentine
Gordon
Rushville
Hay Springs
Chadron
Crawford
Harrison
Agate
Glen
Marsland
Hemingford
Alliance
Hemingford
Berea
Lakeside
Ellsworth
Ashby
Hyannis
Whitman
Wolf
Hicks
Mullen
Seneca
Thedford
Dunlap
Anselmo
Merna
Arnold
Sargent
Ansley
Litchfield
Elyria
Burwell
O'Neill
Ericson
Greeley Center
Spalding
Albion
Genoa

MAP

SHOWING

Great Northern Railway System - ——

(Broken Lines indicate trackage rights over S. P. & S. and Oregon Trunk)

Chicago, Burlington & Quincy R. R. ——

Spokane, Portland & Seattle Railway - }——

And Its Subsidiary Lines

(Owned by Northern Pacific and Great Northern Railway Companies Jointly)

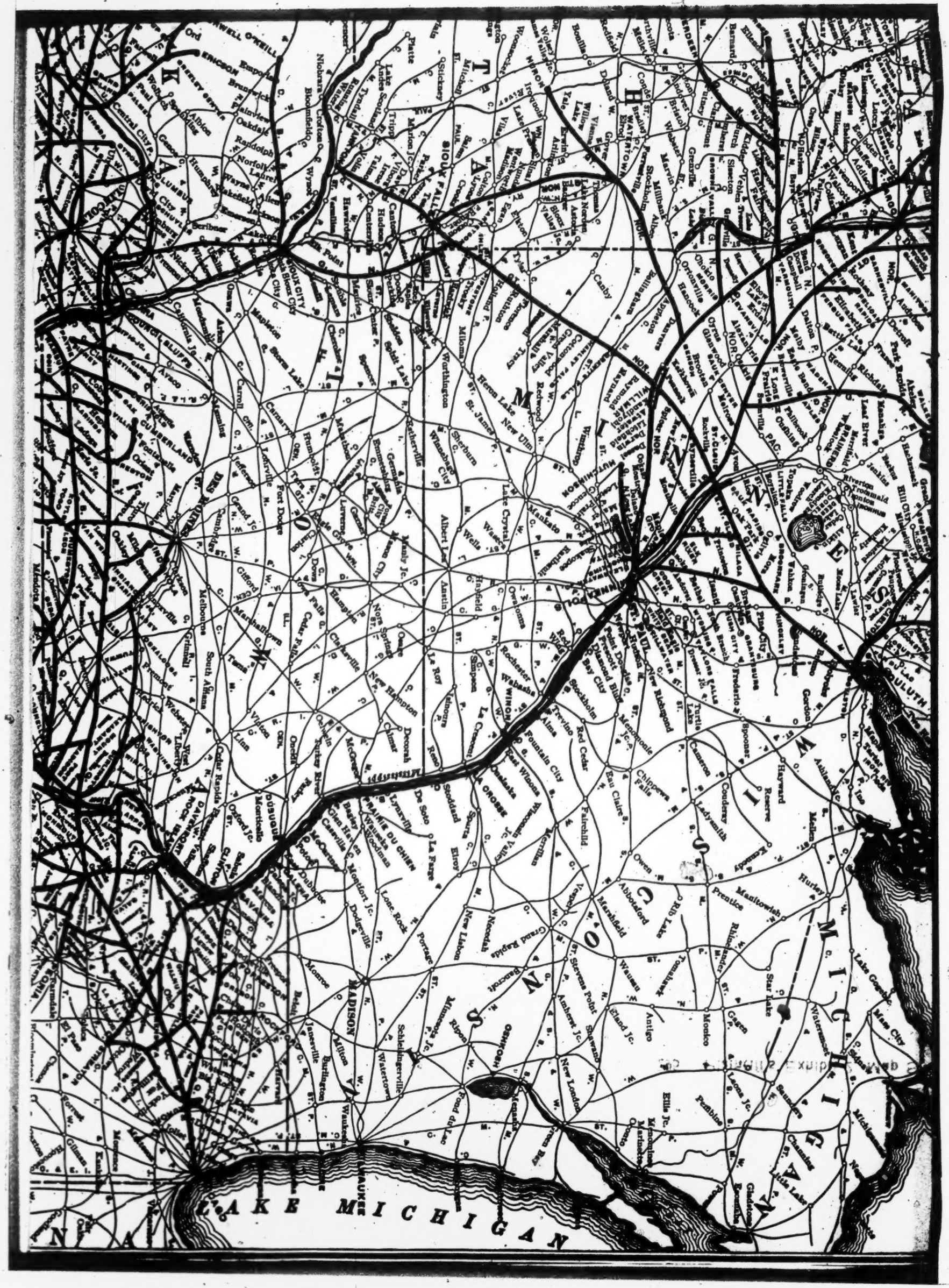
Colorado & Southern Railway Lines - }——

(Controlled by Chicago, Burlington & Quincy Railroad Company)

Trinity & Brazos Valley Railway - - - ——

December 31, 1929

WINNIPEG
St. Boniface
Oak Point
Komarno
Gimli
Selkirk
Lac du Bonnet
Molson
Whitemouth
Kenora
Vermilion
Eagle River
English River
Rainy River
Rainy Lake
Ft. Frances
International Falls
Beaudette
Warroad
Roseau
Mendus
Badger
Greenbush
Strathcona
Middle River
Stephen
Argyle
Warren
Thief River Falls
St. Hilaire
Red Lake Falls
Plummer
Erskine
Fosston
Bagley
Farley
Hines
Funkley
Kelliher
Northome
Gemmell
Margie
Grand Falls
Whaner
Haley
Tower
Vermilion Lake
Winton
Virginia
Hibbing
Chisholm
Keewatin
Nashwauk
Grand Rapids
Swan River
Hackensack
Hill City
Backus
Jenkins
Akeley
Park Rapids
Frazee
Richdale
Menahga
Leaf River
Merrifield
Brainerd
Wheelock
Riverton
Trommald
Motley
Crosby
Ironton
Deerwood
Aitkin
Cuyuna
Rutledge
Moose Lake
Groningen
Wahkon
Topeka
Little Falls
Royalton
Brookpark
Pine City
Grantsburg
Rush City
Taylors Falls
Dresser Jc.
Turtle Lake
Cameron
Ladysmith
Rice Lake
Eau Claire
Menomonie
Chippewa Falls
New Richmond
Hudson
St. Paul
Minneapolis
Red Cedar
Fairchild
Trevino
Alma
Merrill
Stockholm
Point Douglas
Prescott
Diamond Bluff
Bay City
Hayward
Reserve
Spooner
Couderay
Frederic
Osceola
Dalbo
Isanti
Cambridge
Braham
Milaca
Princeton
Elk River
Rockford
St. Cloud
Rockville
Kimball
Watkins
Meeker
Litchfield
Darwin
Atwater
Willmar
Raymond
Maynard
Spicer
New London
Kandiyohi
Sunburg
Svea
Benson
Kerkhoven
Cyrus
Glenwood
Sauk Center
Melrose
Albany
Avon
Sauk Rapids
Oak Park
Rice
Watab
Ogilvie
Mora
Milaca
Swanville
Long Prairie
Eagle Bend
Fallbrook
Cushing
Melby
Dalton
Elbow Lake
Erdahl
Evansville
Alexandria
Osakis
Barrett
Hoffman
Elrosa
Kensington
Starbuck
Glenwood
Lowry
Villard
Morris
Otterburne
Marchand
Stuartburn
Roseau
Emerson
Noyes
Gretna
Plum Coulee
Roland
Carman
Magnus
Portage La Prairie
Delta
Headingley
Portage Jc.
Winnipeg Beach
Gimli
Selkirk
Lac du Bonnet
Whitemouth
Kenora
Vermilion
Eagle River
Hunters Island
Gunflint
Gravel Lake
Grand Marais
Echo Lake
Finland
Hornby
Two Harbors
Duluth
Superior
Lake Superior
Lake Gogebic
Mass City
Watersmeet
Michigamme
Nestoria
Ishpeming
Negaunee
Marquette
Escanaba
Gladstone
Manistique
Marinette
Menominee
Iron Mountain
Crystal Falls
Florence
Amberst Jc.
Stevens Point
Wausau
Antigo
Rhinelander
Monico
Tomahawk
Rib Lake
Abbotsford
Marshfield
Owen
Merrill
Vesper
Arpin
Pittsville
Wisconsin Rapids
Nekoosa
Port Edwards
Necedah
Tomah
La Crosse
Winona
Rochester
Austin
Albert Lea
Mankato
New Ulm
Sleepy Eye
Springfield
Redwood Falls
Marshall
Tracy
Lucan
Wabasso
Redwood Falls
Minneota
Ivanhoe
Marshall
Canby
Watertown
Willmar
Hutchinson
Glencoe
Winthrop
Arlington
Gaylord
Hector
Buffalo
Delano
Montrose
Waverly
Howard Lake
Watertown
Mayer
Norwood
Young America
Carver
Chaska
Shakopee
Minneapolis
St. Paul
Hastings
Red Wing
Wabasha
Lake City
Reads Landing
Alma
Fountain City
Winona
La Crescent
Houston
Caledonia
Spring Grove
Harmony
Preston
Fountain
Lanesboro
Whalan
Peterson
Rushford
Mabel
Caledonia
Houston
Hokah
Brownsville
La Crescent
Winona
Minnesota City
Stockton
Utica
Dakota
Homer
Minnesota City
Winona
Goodview
Wilson
Stockton
Rollingstone
Minnesota City
Utica
Dakota
Homer


LAKE MICHIGAN
MINNEAPOLIS
ST. PAUL
DULUTH
MADISON
MILWAUKEE
SIOUX FALLS
SIOUX CITY
COUNCIL BLUFFS
DES MOINES
OMAHA
MINNESOTA
IOWA
NEBRASKA
SOUTH DAKOTA
WISCONSIN
MICHIGAN

Plaintiff's Exhibit 3

Great Northern Railway Company

Valuation Division

Units Per Mile of Road

North Dakota and Remainder of System

	Grading					Tunnels	Bridges				Snow Sheds	Signals
	Common Cu. Yds.	Hard Pan Cu. Yds.	Loose Rock Cu. Yds.	Solid Rock Cu. Yds.	Total Cu. Yds.	Lin. Ft.	Steel Lbs.	Timber MBM	Concrete Slabs Each	Rail G. T.	Lin. Ft.	Miles
Main Line—North Dakota	38,301	11	1,550	49	39,911	00	25,525	2.550	0.63	194.37	00	0.58
Branch Lines—North Dakota	18,762	143	1,222	189	20,316	1.24	5,623	5.344	.00	106.43	00	00
Total—North Dakota	26,397	92	1,351	134	27,974	0.76	13,400	4.352	0.24	141.80	00	0.23
Remainder of System	36,640	5,394	1,637	3,373	47,044	16.59	30,048	8.669	0.49	176.04	1.98	0.36
Percentage, North Dakota to Remainder of System	.720	.017	.825	.040	.595	.046	.446	.502	.49	.805	0	.639

Valuation Office,
St. Paul, Minnesota,
April 23 and September 20th, 1934.

297 Plaintiff's Exhibit 4

Great Northern Railway Co.

Terminals at St. Paul–Minneapolis, Lake Superior and Puget Sound, December 31, 1932.

Location	Value	
St. Paul	$15,671,746	
Minneapolis	16,294,820	$31,966,566
Superior	5,625,959	
Allouez	12,433,220	18,059,179
Deita	1,567,717	
Everett	1,321,859	
Seattle	15,888,800	18,778,376
Total		$68,804,121

Valuation Office,
September 29th, 1934

298 Plaintiff's Exhibit 5

Great Northern Railway Co.

Principal terminals (Not including those at St. Paul—Minneapolis, Lake Superior or Puget Sound, Dec. 31, 1932.

State	Miles	Terminals
Wisconsin	38.35	None
Minnesota	2072.20	Willmar Breckenridge St. Cloud Cass Lake Kelly Lake Crookston
North Dakota	1917.41	Grand Forks Minot Fargo Williston Devils Lake
South Dakota	364.14	Watertown
Iowa	78.02	Sioux City
Montana	1861.24	Glasgow Havre Great Falls Blackfoot Whitefish Butte

Idaho	107.40	None
Washington	959.00	Hillyard Appleyard Marcus
Oregon	94.36	Klamath Falls
California	99.24	None
Total Miles	7591.36	

Total Terminals	23
Average miles per terminal	330
Average miles per terminal in No. Dak.	383

Valuation Office,
September 28, 1934

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299 Plaintiff's Exhibit 6

Great Northern Railway Co.

Mileage Statement

State	Total	Main	Branch	% Main	% Branch
Wisconsin	38	38	0	100.0	0
Minnesota	2072	1057	1015	51.0	49.0
Iowa	78	78	0	100.0	0
North Dakota	1918	735	1183	38.3	61.7
South Dakota	364	13	351	3.5	96.5
Montana	1861	1308	553	70.3	29.7
Idaho	108	81	27	75.0	25.0
Washington	959	472	487	49.2	50.8
Oregon	94	94	0	100.0	0
California	99	66	33	66.7	33.3
Total	7591	3942	3649	51.9	48.1
Less N. D.	1917	735	1182		
Balance of System in U. S.	5674	3207	2467	56.5	43.5
U. S. less N. D.	5674	3207	2467		
Canada	360	0	360		
Total	6034	3207	2827	53.0	47.0

Valuation Office,
September 28th, 1934

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Plaintiff's Exhibit 7

Great Northern Railway Co.

Miles of Road and Cost of Reproduction New Less Depreciation as of 1915 plus Additions and Betterments to December 31, 1932

	Mileage	
Wisconsin	38.35	$ 21,849,997
Minnesota	2,072.20	136,222,956
Iowa	78.02	5,735,942
North Dakota	1,917.41	78,190,762
South Dakota	364.14	9,051,582
Montana	1,861.24	136,169,327
Idaho	107.40	10,926,120
Washington	959.00	122,365,484
Oregon	94.36	7,781,644
California	99.24	4,244,370
Total United States	7,591.36	532,538,184
Canada (Investment)	359.96	32,070,504
	7,951.32	564,608,688

Reproduction plus Additions and Betterments per mile—No. Dak.	$40,779
Balance System in U. S.	80,076
Ratio Balance System to North Dakota	196
Reproduction plus A. & B. per mile—Balance of System including Canada	80,614
Ratio to North Dakota	198

Valuation Office
September 28, 1934

Plaintiff's Exhibit 8

Statement of Capital Stock, Bonds and Other Securities of Other Companies and Other Non-Operating Property Owned by The Great Northern Railway Company and Estimated Amount to Be Deducted From Total Market Value of Stocks and Bonds of Great Northern Railway Company.

Security	Par Value	Book Value		Estimated Amount to be Deducted from System Stock and Bond Value
1. Brandon, Devils Lake & Southern Ry. Co.				
Stock	$ 650,500	$ 650,500		
Assessed Valuation, 1933			$ 155,634	
B. D. L. & S. Ry. Co. owns Farmers Grain & Shipping Co.				
Stock $121,025				
Bonds 438,000				
Assessed Valuation, 1933			627,808	$ 783,442
2. Canadian Rockies Hotel Co., Ltd.				
Stock	727,500	727,500		
Assessed Valuation, 1933			$ 350,000	
Owns Province of Alberta Bonds $144,000				
Annual Interest received $6,480. Capitalized at 6%			108,000	458,000
3. Chicago, Burlington & Quincy R. R. Co.				
Stock	83,017,900	109,245,456		
5 yr. average annual dividends, $7,969,718. Capitalized at 6%				132,828,633
4. Cottonwood Coal Co.				
Stock	1,000,000	1,000,000		
Assessed Valuation,				273,213
This amount does not include value of unmined coal in Montana which is taxed on Net Proceeds of Mines. Estimated amount, 150,000,000 tons.				
5. Dakota and Great Northern Townsite Co.				
Stock	50,000	25,000		
Assessed Valuation,				1,723,892
6. Duluth & Superior Bridge Co.				
Stock	200,000	200,000		
Bonds	650,000	650,000		
Bonds	296,000	295,100		
Five year average dividends and interest received, $87,419. Capitalized at 6%				1,456,983
7. Lake Superior Terminal & Transfer Ry. Co.				
Stock	169,800	169,800		
Five year average dividends received, $8,150. Capitalized at 6%				135,833
8. Somers Lumber Company				
Stock	1,150,000	1,240,000		
Assessed Valuation,			$2,841,375	
Less unpaid purchase price,			962,807	1,878,568
9. Spokane, Coeur d'Alene & Palouse Ry. Co.				
Stock	20,000	20,000		
Assessed Valuation,				828,424
10. Spokane, Portland & Seattle Ry. Co.				
Stock	20,000,000	20,000,000		
Bonds	36,855,000	25,798,500		
Assessed Valuation,				
(Operating Property Only) S. P. & S. Washington			$23,900,000	
" " " S. P. & S. Oregon			8,507,037	
S. P. & S. owns Oregon Trunk Washington			500,000	
" " " " Oregon			3,290,755	
S. P. & S. owns Oregon Electric Oregon			2,692,750	
S. P. & S. owns United Railways Oregon			1,494,285	
			$40,384,827	
Great Northern one-half interest.				20,192,414

	Stock	1,150,000	1,240,000		
	Assessed Valuation,			$2,841,375	
	Less unpaid purchase price,			962,807	1,878,568
9.	Spokane, Coeur d'Alene & Palouse Ry. Co.				
	Stock	20,000	20,000		
	Assessed Valuation,				828,424
10.	Spokane, Portland & Seattle Ry. Co.				
	Stock	20,000,000	20,000,000		
	Bonds	36,855,000	25,798,500		
	Assessed Valuation,				
	(Operating Property Only) S. P. & S. Washington			$23,900,000	
	" " " S. P. & S. Oregon			8,507,037	
	S. P.& S. owns Oregon Trunk . Washington			500,000	
	" " " " Oregon			3,290,755	
	S. P. & S. owns Oregon Electric Oregon			2,692,750	
	S. P. & S. owns United Railways Oregon			1,494,285	
				$40,384,827	
	Great Northern one-half interest.				20,192,414
11.	Twin City Belt Railway Company				
	Stock	30,000	30,000		
	Assessed Valuation,			65,615	
	Great Northern one-third interest,				21,872
12.	Washington & Great Northern Townsite Co.				
	Stock	50,000	15,939		
	Assessed Valuation,			$ 649,690	
	W. & G. N. T. Co. owns Glazier Park Hotel Co., Assessed Valuation,			915,802	1,565,492
302 13.	Western Fruit Express Co.				
	Stock	$ 6,800,000	$ 6,800,000		
	Five year average annual dividends received, $746,700. Capitalized at 6%				$ 12,445,000
14.	Crow's Nest Pass Coal Co., Ltd.				
	Stock	491,700	810,210		
	Five year average annual dividends received, $23,058. Capitalized at 6%				384,300
15.	St. Paul Foundry Company				
	Stock	310,800	233,100		
	Five year average annual dividends received, $27,195. Capitalized at 6%				453,250
16.	Wisconsin Central Ry. Co.				
	Terminal Bonds	275,000	247,500		
	Five year average annual interest received, $9,625. Capitalized at 6%				160,417
17.	Cowlitz, Chehalis & Cascade Ry. Co.				
	Bonds	125,250	125,250		
	Five year average annual interest received, $7,515. Capitalized at 6%				125,250
18.	Hill City Railway Company				
	Bonds	25,000	25,000		
	Three year average annual interest received, $1,250. Capitalized at 6%				20,833
19.	Land Grant Lands, 114,707 acres				
	Estimated value,				1,000,000
20.	Locally Assessed Property,				
	Assessed Valuation,				5,500,000
	Totals,	$152,894,450	$168,308,855		$182,235,816

Great Northern Railway Company
Tax Division—
St. Paul, Minnesota.

Plaintiff's Exhibit 9

Statement Showing, by States, The Assessed Valuation of The Great Northern Railway Company's Operating Property for The Years 1932 and 1933, Also Interstate Commerce Commission Cost of Reproduction Less Depreciation Plus Additions and Betterments and The Proportion Which The Assessed Valuation for Each State Is of Said Cost of Reproduction.

State	1932 Assessed Valuation	I. C. C. Cost of Reproduction Less Depreciation Plus Additions and Betterments to December 31, 1931	Ratio	1933 Assessed Valuation	I. C. Cost of Reproduction Less Depreciation Plus Additions and Betterments to December 31, 1932	Ratio
Wisconsin	$ 13,300,000	$ 22,355,155	59.49%	$ 11,750,000	$ 21,849,997	53.78%
Iowa	2,001,057	5,716,635	35.00%	1,616,965	5,735,942	28.19%
South Dakota	6,800,000	9,014,589	75.43%	5,990,000	9,051,582	66.18%
Montana	80,068,225	137,823,113	58.09%	71,718,016	136,169,327	52.67%
Idaho	4,996,540	11,051,805	45.21%	4,496,886	10,926,120	41.16%
Washington	69,574,000	122,166,455	56.95%	66,099,986	122,365,484	54.02%
Oregon	2,769,505	6,478,671	42.75%	2,561,125	7,781,644	32.91%
Total 7 States	$179,509,327	$314,606,423	57.06%	$164,232,978	$313,880,096	52.32%
North Dakota	78,849,997	78,057,683	101.02%	78,832,888	78,190,762	100.82%
Total 8 States	$258,359,324	$392,664,106	65.80%	$243,065,866	$392,070,858	62.00%

Great Northern Ry. Co.
Tax Division
St. Paul, Minnesota.

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Plaintiff's Exhibit 10

Great Northern Railway Company

Name of Line	1933 Assessment	Reproduction Cost New	% Assmt. to Reproduction	Miles of Road	Assessment Per Mile
Great Northern	$78,832,888	$89,964,680	87.63%	1,913.12	$41,206.45
Northern Pacific	61,293,106	82,960,434	73.88%	1,521.08	40,295.78
M. St. P. & S. S. M.	22,282,990	38,079,645	58.52%	1,314.43	16,952.59
C. M. St. P. & P.	8,147,354	11,680,061	69.75%	372.30	21,883.84

Tax Division
St. Paul, Minnesota.

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Plaintiff's Exhibit 11

Apportionment of Revenue on Mileage Prorate Basis

30-Ton Shipment

State	Miles Hauled (1)	Net Ton Miles (2) = 30 tons x Col. 1	Approximate Cost Per 100 Ton Miles: Operating Cost (3)	Allowance for use of property at 4% (4)	Total Cost Per Car: For Operating Expenses (5) = (2) x (3)	For use of property at 4% (6) = (2) x (3)	Total (7) = 5+6	Mileage Prorate Basis of Dividing Through Revenue As Used by Tax Comm'r of North Dakota: Through revenue 80¢ cwt. or $16 per ton divided in proportion to miles hauled—Col. 1. (8)	Percent return on property used (9)
Wash.	400	12000	$.95	$.45	$114	$54	$168	$106.67	(deficit)
Mont & Idaho	800	24000	.55	.25	132	60	192	213.33	5.4%
N. Dak	400	12000	.50	.20	60	24	84	106.67	7.8%
Minn	200	6000	.40	.20	24	12	36	53.33	9.7%
Total	1800	54000					$480	$480.00	4.0%

Plaintiff's Exhibit 12

Schedule A

Great Northern Railway Company

Percentage of System Net Railway Operating Income (Excluding Taxes) Earned in North Dakota with Interstate Freight Revenue Apportioned Between States on a Cost Basis

1928 – 1932

	1928	1929	1930	1931	1932	Total Five years 1928–1932	Total Three Years 1930–1932	
North Dakota:								
I Operating revenues:								
A—Freight								
1—Intrastate	$ 1,289,150	$ 1,407,295	$ 1,238,744	$ 1,019,373	$1,063,937	$ 6,018,499	$ 3,322,054	Annual Report to Railroad Commissioners of North Dakota
2—Interstate apportioned on cost basis	14,338,757	13,630,593	11,735,699	9,030,625	6,827,157	55,562,833	27,593,481	Schedule B
B—All other operating revenues	3,985,528	4,379,102	3,494,523	2,475,824	1,836,677	16,171,654	7,807,024	Annual Report to Railroad Commissioners of North Dakota
C—Total operating revenues	19,613,435	19,416,992	16,468,966	12,525,822	9,727,771	77,752,986	38,722,559	Item I A plus item I B
II Operating expenses	13,949,468	14,079,678	12,551,779	9,966,340	8,470,999	59,018,264	30,989,116	Annual Report to Railroad Commissioners of North Dakota
III Net revenue from railway operations	$ 5,663,967	$ 5,337,314	$ 3,917,187	$ 2,559,482	$1,256,772	$ 18,734,722	$ 7,733,441	Item I minus item II
IV Uncollectible railway revenues	$ 2,092	$ 2,553	$ 1,489	$ 1,570	$ 2,440	$ 10,144	$ 5,499	Schedule A
V Equipment rents, Dr.	328,097	193,277	267,201	301,074	314,830	1,404,479	883,105	Schedule D
VI Joint facility rents, Cr.	365	360	63	451	352	1,591	866	Schedule C
VII Total uncollectible railway revenues equipment and joint facility rents—Net Dr.	$ 329,824	$ 195,470	$ 268,627	$ 302,193	$ 316,918	$ 1,413,032	$ 887,738	Sums of items IV, V and VI
VIII Net railway operating income excluding taxes	$ 5,334,143	$ 5,141,844	$ 3,648,560	$ 2,257,289	$ 939,854	$ 17,321,690	$ 6,845,703	Item III minus item VII
System:								
IX Net railway operating income	$31,294,069	$32,457,523	$21,912,508	$12,669,420	$1,290,551	$ 99,624,071	$35,872,479	Annual Report to Tax Commissioners of North Dakota, 1932
X Railway tax accruals	10,297,997	9,201,154	8,712,598	7,179,028	6,697,424	42,088,201	22,589,050	" " " " " "
XI Net railway operating income excluding taxes	41,592,066	41,658,677	30,625,106	19,848,448	7,987,975	141,712,272	58,461,529	Item IX plus item X
North Dakota Per Cent of System Net Railway Operating Income Excluding Taxes	12.82	12.34	11.91	11.37	11.77	12.22	11.71	Item VIII divided by item XI

Schedule B

Great Northern Railway Company

Division of Interstate Freight Revenue on Basis of Cost

1928 - 1932

		1928			1929			1930		
		System (1)	North Dakota (2)	All Other (3) = 1-2	System (4)	North Dakota (5)	All Other (6) = 4-5	System (7)	North Dakota (8)	All Other (9) = 7-8
1.	Freight operating expenses	$61,788,500	$10,167,151	$51,621,349	$61,402,640	$10,031,100	$51,371,540	$52,259,982	$ 8,742,710	$43,517,272
2.	Hire of equipment—freight proportion—Dr.	1,723,924	368,222	1,355,702	1,080,461	210,574	869,887	1,389,890	274,852	1,115,038
3.	Joint facility rents—freight proportion	Dr. 280,586	Cr. 266	Dr. 280,852	Dr. 298,220	Cr. 256	Dr. 298,576	Dr. 322,248	Cr. 44	Dr. 322,292
4.	Allowance for use of property based on I. C. C.'s cost of reproduction new, less depreciation, plus additions and betterments since valuation date—freight proportion	30,890,521	4,185,460	26,705,061	30,865,387	4,132,251	26,733,136	22,072,357	2,975,212	19,097,145
5.	Total above costs (excludes taxes)	$94,683,531	$14,720,567	$79,962,964	$93,646,808	$14,373,669	$79,273,139	$76,044,477	$11,992,730	$64,051,747
6.	Revenue net ton miles (thousands)	10,127,254	2,047,256	8,079,998	10,150,710	1,764,279	8,386,431	8,720,584	1,587,079	7,133,505
7.	Cost per 1000 revenue net ton miles	—	$ 7.190	$ 9.896	—	$ 8.147	$ 9.453	—	$ 7.556	$ 8.979
8.	Interstate revenue net ton miles (thousands)	—	1,973,643	7,507,658	—	1,682,481	7,793,726	—	1,511,323	6,597,216
9.	Cost of handling interstate traffic	—	$14,190,493	$74,295,784	—	$13,707,173	$73,674,092	—	$11,419,557	$59,236,402
10.	Interstate freight revenue—System	$89,393,748	—	—	$86,874,409	—	—	$72,621,900	—	—
11.	Division of interstate freight revenue on basis of cost	—	$14,338,757	$75,054,991	—	$13,630,595	$73,243,814	—	$11,735,699	$60,886,201
12.	Intrastate freight revenue—North Dakota	—	$ 1,289,150	—	—	$ 1,407,295	—	—	$ 1,238,744	—
13.	Total freight revenue—North Dakota	—	$15,627,907	—	—	$15,037,890	—	—	$12,974,443	—

		1931			1932			
		System	North Dakota	All Other	System	North Dakota	All Other	
1.	Freight operating expenses	$39,337,050	$ 7,001,679	$32,335,371	$32,252,839	$ 5,985,570	$26,267,269	Annual report to Railroad Commissioners of N. D.
2.	Hire of equipment—freight proportion—Dr.	1,423,921	293,136	1,130,785	1,452,661	301,361	1,151,300	Schedule C
3.	Joint facility rents—freight proportion	Dr. 347,867	Cr. 317	Dr. 348,184	Dr. 266,648	Cr. 249	Dr. 266,897	Schedule C
4.	Allowance for use of property based on I. C. C.'s cost of reproduction new, less depreciation, plus additions and betterments since valuation date—freight proportion	14,125,819	1,930,210	12,195,609	5,623,638	779,019	4,844,619	Schedule C
5.	Total above costs (excludes taxes)	$55,234,657	$ 9,224,708	$46,009,949	$39,595,786	$ 7,065,701	$32,530,085	Sum of Items 1 to 4 inclusive
6.	Revenue net ton miles (thousands)	6,151,063	1,168,971	4,982,092	4,324,700	910,222	3,414,478	Annual report to Railroad Commissioners of N. D.
7.	Cost per 1000 revenue net ton miles	—	$ 7.891	$ 9.235	—	$ 7.763	$ 9.527	Item 5 divided by Item 6
8.	Interstate revenue net ton miles (thousands)	—	1,100,533	4,544,064	—	835,212	3,125,147	Current records of Great Northern Ry. Co.
9.	Cost of handling interstate traffic	—	$ 8,684,306	$41,964,431	—	$ 6,483,751	$29,773,275	Item 7 multiplied by Item 8
10.	Interstate freight revenue—System	$52,656,707	—	—	$38,183,202	—	—	Current records of Great Northern Ry. Co. as reported to each State Railroad Commission
11.	Division of interstate freight revenue on basis of cost	—	$ 9,030,625	$43,626,082	—	$ 6,827,157	$31,356,045	Item 10 divided between North Dakota and all other on basis of cost of handling interstate traffic, Item 9
12.	Intrastate freight revenue—North Dakota	—	$ 1,019,373	—	—	$ 1,063,937	—	Annual report to Railroad Commissioners of N. D.
13.	Total freight revenue—North Dakota	—	$10,049,998	—	—	$ 7,891,094	—	Item 11 plus Item 12

308 Plaintiff's Exhibit 13

Great Northern Railway Company

Tons of Revenue Freight Originated Per Mile of Road

1930 — 1932

	State of North Dakota	Balance of System
Tons of Revenue Freight Originating:		
Year 1930	2,310,036	23,688,003
" 1931	1,602,244	13,575,836
" 1932	1,236,119	6,400,963
Average Miles of Road Freight Operated:		
Year 1930	1,917.90	6,420.70
" 1931	1,917.78	6,411.44
" 1932	1,917.41	6,463.18
Tons of Revenue Freight Originating per Mile of Road Freight Operated:		
Year 1930	1,204	3,689
" 1931	835	2,117
" 1932	645	990

Source—Annual Reports to North Dakota Board of Railroad Commissioners

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309 Plaintiff's Exhibit 14

Great Northern Railway Company

Net Ton Miles per Mile of Road.

1930 — 1932

	State of North Dakota	Balance of System
Ton Miles of Revenue Freight Carried:		
Year 1930	1,587,079,064	7,133,504,840
" 1931	1,168,970,768	4,982,092,631
" 1932	910,222,371	3,414,478,023
Average Miles of Road Freight Operated:		
Year 1930	1,917.90	6,420.70
" 1931	1,917.78	6,411.44
" 1932	1,917.41	6,463.18
Ton Miles of Revenue Freight Carried per Mile of Road Freight Operated:		
Year 1930	827,509	1,111,017
" 1931	609,544	777,063
" 1932	474,715	528,297

Source—Annual Reports to North Dakota Board of Railroad Commissioners.

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310 Plaintiff's Exhibit 15

Great Northern Railway Company

Freight Revenue Per Revenue Net Ton Mile on Intrastate Traffic

State	Year 1932 (cents)	Year 1933 (cents)
Minnesota	2.388	2.442
Wisconsin	13.556	4.713
South Dakota	2.751	4.645
Iowa	3.280	3.231
North Dakota	1.418	1.248
Montana	2.368	1.954
Idaho	5.024	1.747
Washington	2.205	1.880
Oregon	1.887	1.063
California	7.328	2.509
System	2.134	1.881

311 Plaintiff's Exhibit 16

Great Northern Railway Company

Capitalization of Net Railway Operating Income

Year	Net Railway Operating Income
1928	$31,294,069
1929	32,457,524
1930	21,912,508
1931	12,669,420
1932	1,290,551
1933	11,810,227

Capitalization of Average Net Railway Operating Income

Period	Rate 6%	7%	8%
1928 — 1932 (5 years)	$332,080,233	$284,640,200	$249,060,175
1930 — 1932 (3 years)	199,291,550	170,821,329	149,468,663
1932 (1 year)	21,509,183	18,436,443	16,131,888

312 Plaintiff's Exhibit 17

Great Northern Railway Company

Yield to Maturity on Bonds Based on Average Market Prices, 1932 and 1933.

Yield to Maturity on Outstanding Bonds:

1932 — 10.72%

1933 — 11.23%

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Plaintiff's Exhibit 18

Great Northern Railway Company

Year (1)	Net Railway Operating Income (2)	Net Income Other Properties and Securities (3)	Total (4)=2÷3	Ratio Column 2 to Column 4 (5)=2÷4
1928	$31,294,069	$12,410,183	$43,704,252	71.60%
1929	32,457,524	11,473,547	43,931,071	73.88
1930	21,912,508	14,802,491	36,714,999	59.68
1931	12,669,420	11,552,886	24,222,306	52.30
1932	1,290,551	4,560,363	5,850,914	22.06
Avg. 1928-1932	19,924,814	10,959,894	30,884,708	64.51

Average Market Value of Stocks and Bonds

Period (1)	Stocks (2)	Bonds (3)	Total (4)=2÷3	Separate Value of Railroad Property Based on Percent of Income (5)	Separate Value of Railroad Property Based on appraisal of non-operating amounts from Exhibit 2 (6)
Avg. 1930-32 (3 yrs)	$116,566,411	$326,580,395	$443,146,806	$238,014,150	$260,910,990
" 1931-32 (2 ")	72,660,382	306,412,732	379,073,114	175,965,740	196,837,298
1932	32,830,915	263,470,262	296,301,177	65,364,040	114,065,361
1933	44,016,245	261,693,630	305,709,875		
1934 to Sept. 15	55,206,816	323,129,716	378,336,532		

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Plaintiff's Exhibit 19

Great Northern Railway Company

Assignment of System Value to North Dakota

	System Value	Percentage Applicable to North Dakota	North Dakota Proportion
1. Average 1930-1932 earnings capitalized at 7%	$170,821,329		
2. Average stock and bond value, 1930-1932—railway income proportion	238,014,150		
3. Average of lines 1 and 2	204,417,740		
4. 11.71% allocated to North Dakota—1930-1932 (Exhibit)		11.71	$23,937,317
Allocation Rates Advocated by Defendant:			
(a) Mileage all tracks (Dec. 31, 1932)		19.96%	
(b) Car and locomotive mileage (5 yr. average)		20.04	
(c) Revenue traffic units (5 yr. average)		18.93	
(d) Gross operating revenues (5 yr. average with mileage pro-rate of through revenue)		18.45	
(e) Physical property (cost of reproduction new, less depreciation)		13.85	
5. Average lines (a) to (e) inclusive		18.25	
6. Allocation to North Dakota 18.25 (line 5) of line (3)		18.25	$37,306,238
7. Highest value on Exhibit	$332,080,233		
8. Highest value on Exhibit	260,910,990		
9. Average of lines 7 and 8	296,495,612		
10. 11.71% (Exhibit) of line 9 allocated to N. D.		11.71	$34,719,636
11. 18.25% (line 5) of line 9 allocated to N. D.		18.25	54,110,449
12. Assessed valuation, North Dakota 1933			$78,832,888

315

Plaintiff's Exhibit 20

Great Northern Railway Company

Net Railway Operating Income

		Average Net Railway Operating Income	Per Cent Decrease
1.	Average 1927–1931 (5 years)	$25,507,212	
2.	Average 1928–1932 (5 years)	19,924,814	
3.	Per Cent decrease		21.89%
4.	Average 1929–1931 (3 years)	22,346,484	
5.	Average 1930–1932 (3 years)	11,957,493	
6.	Per Cent decrease		46.49
7.	Year 1931	12,669,420	
8.	Year 1932	1,290,551	
9.	Per Cent decrease		89.81
10.	Average of above per cents (lines 3, 6 and 9)		52.73%

Average Market Price of Stocks and Bonds Attributable To Railway Property by Method Shown in Exhibit 6

		Average Market Price of Stocks and Bonds	Assessed Valuation	Per Cent Decrease
11.	Average 1929–1931 (3 years)	$350,073,364		
12.	Average 1930–1932 (3 years)	238,014,150		
13.	Per Cent decrease			32.01%
14.	Average 1930–1931 (2 years)	293,153,260		
15.	Average 1931–1932 (2 years)	175,965,740		
16.	Per Cent decrease			39.97
17.	Year 1931	241,544,962		
18.	Year 1932	65,364,040		
19.	Per Cent decrease			72.94
20.	Average of above per cents (lines 13, 16 and 19)			48.31%
21.	Average of lines 10 and 20			50.52%
22.	1932 Assessed valuation North Dakota		$78,849,997	
23.	1933 Assessed valuation North Dakota		78,832,888	
24.	Per Cent decrease			0.02%

316 Plaintiff's Exhibit 21

Comparison of Assessed Value in North Dakota with Proportion of System Value Assigned to North Dakota on Basis of Plaintiff's Exhibit 12
Calendar Years 1928 - 1932

Calendar Year	System Value as Determined in Defendant's Exhibit ... (1)	Rate of Allocation to North Dakota Plaintiff's Exhibit 12 (2)	Amount of System Value Assignable to North Dakota (3) = (1)x(2)	Actual Assessment in North Dakota Defendant's Exhibit ... (4)	Per Centage of over Assessment in North Dakota (5) = (4)-(3) ÷ (3)
1928	$437,789,980	12.82%	$56,124,675	$83,294,677	48.4%
1929	460,989,128	12.34%	56,886,058	83,294,688	46.4%
1930	455,777,674	11.91%	54,283,121	82,999,997	52.9%
1931	415,278,961	11.37%	47,217,218	78,850,024	67.0%
1932	345,188,820	11.77%	40,628,724	78,832,888	94.0%

317 Plaintiff's Exhibit 22

Great Northern Railway Company

Comparison of System Values on Different Bases and Variation in Percentages of System Value to be Assigned to North Dakota.

	Average for 3 years 1930 - 1932	Average for 4 years 1929 - 1932	Average for 5 years 1928 - 1932
System Value:			
1. Capitalization of net railway operating income			
(a) at 7%	$170,821,329	$244,035,729	$284,640,200
(b) at 6%	199,291,550	284,708,350	332,080,233
2. Stock and Bond Value with deduction for non-operating property			
(a) Based on 5 yrs income (36.71%)	280,467,616	306,808,851	322,236,814
(b) Based on composite income and asset ratio, defendant's Ex. I (30.29%)	308,917,641	337,930,874	354,923,815
3. Capitalization of prospective future normal net railway operating income of $14,000,000			
(a) at 7%	200,000,000	200,000,000	200,000,000
(b) at 6%	233,333,333	233,333,333	233,333,333
Assignment to North Dakota:			
4. Basis of net income before taxes Plaintiff's Ex. 12 for 5 years		12.22%	
5. Basis 5 factor per cents, Defendant's Ex. P, block 4, for 5 years		18.34%	

318 Plaintiff's Exhibit 23

Great Northern Railway Company

See Defendant's Exhibit U.

Comparison of Farm Income with the Assessed Valuation of Farm Real and Personal Property, 1928-1932.

Year	Gross income from farm production	Cash income from farm production	Assessment of farm real and personal property	Ratio of assessment to gross income	Ratio of assessment to cash income
1928	$249,585,000	$227,810,000	$909,468,343	364%	399%
1929	211,942,000	189,748,000	904,605,843	427	477
1930	147,931,000	129,184,000	903,526,834	611	699
1931	72,716,000	59,622,000	761,175,701	1047	1277
1932	71,364,000	60,626,000	745,671,817	1045	1230

Comparison of Great Northern Assessment with Net Operating Revenues in North Dakota for the Years 1928-1932

Year	Net operating revenues after taxes	Assessment	Ratio of assessment to net revenues
1928	$9,146,501	$82,266,386	899%
1929	6,628,548	83,294,677	1,257
1930	4,367,620	83,294,688	1,907
1931	2,131,043	82,999,997	3,895
1932	581,644	78,850,024	13,556

Per cent ratio of assessment to income 1932 compared with 1928 on basis of

(1) Gross income from farm production 287%

(2) Cash income from farm production 308%

(3) Net operating revenues after taxes Great Northern Ry. Co. 1508%

Note: Net operating revenues after taxes are gross operating revenues (assigning interstate on mileage prorate) less operating expenses and taxes not that revenues so assigned are accurate but merely for illustrative purposes

mufls & G.

Table - 2 - (L. A. Baker)

GREAT NORTHERN RAILWAY COMPANY

STATEMENT SHOWING PAR VALUE OF CAPITAL STOCK AND FUNDED DEBT OF THE GREAT NORTHERN RAILWAY CO
AND AVERAGE QUOTATIONS AND MARKET VALUE FOR ONE YEAR AND FIVE YE

Description of Capital Stock and Funded Debt		Par value outstanding Dec. 31, 1932	Average ma year ended Average Quotations
Capital Stock			
Preferred		$ 248,719,050	$ 13.20
Bonds			
G.N.Ry. Co. - First & Refunding mtge.gold bonds	4½%	35,668,000	77.90
- General mtge. gold bonds, Series "B"	5½%	30,000,000	64.00
" " " " Series "C"	5 %	15,000,000	61.00
" " " " Series "D"	4½%	15,000,000	55.90
" " " " Series "E"	4½%	40,000,000	56.00
St.P. M. & M. Ry.Co. - Consolidated mtge bonds.	6 %	13,344,000	96.50
" " " "	4½%	20,797,000	93.80
" " " "	4 %	7,822,000	94.00
- Montana Extension mtge.bonds	4 %	10,185,000	85.00
- Pacific Extension mtg.bonds	4 %	28,383,515	75.30
East Ry. Co. of Minn - Nor.Div.1st mtge. bonds	4 %	9,695,000	80.20
Montana Central Ry. Co. - 1st mtge bonds	6 %	6,000,000	92.20
" " " " - 1st mtge. bonds	5 %	4,000,000	85.80
Wilmar & Sioux Falls Ry. Co. - 1st mtge. bonds	5 %	3,625,000	100.00*
Spokane Falls & Northern Ry. Co. - 1st mtge. bonds	6 %	229,000	100.00*
Equipment Obligations			
G.N.Ry. Co. - Equip. Trust.Series "B" Ser.Trs.Cert.	5 %	3,450,000	100.00*
" " " " "C" " " "	4½%	2,100,000	100.00*
" " " " "D" " " "	4½%	1,986,000	100.00
Total (Exclusive of Series "A" Gen.Mtge.Gold bonds)		$247,284,515	
G.N.Ry. Co. - General Mortgage gold bonds, Series "A"	7 %	105,859,000	74.30
TOTAL ALL BONDS		353,143,515	

Description of Capital Stock and Funded Debt		Outstanding Dec. 31, 1932	Average Quotations
Capital Stock			
Preferred		$ 248,719,050	$ 13.20
Bonds			
G.N.Ry. Co. - First & Refunding mtge.gold bonds	4½%	35,668,000	77.90
" - General mtge. gold bonds, Series "B"	5½%	30,000,000	64.00
" " " " Series "C"	5 %	15,000,000	61.00
" " " " Series "D"	4½%	15,000,000	55.90
" " " " Series "E"	4½%	40,000,000	56.00
St.P. M. & M. Ry.Co. - Consolidated mtge bonds.	6 %	13,344,000	96.50
" " " "	4½%	20,797,000	93.80
" " " "	4 %	7,822,000	94.00
" Montana Extension mtge.bonds	4 %	10,185,000	85.00
" Pacific Extension mtg.bonds	4 %	28,383,515	75.30
East Ry. Co. of Minn - Nor.Div.1st mtge. bonds	4 %	9,095,000	80.20
Montana Central Ry. Co. - 1st mtge bonds	6 %	6,000,000	92.20
" " " - 1st mtge. bonds	5 %	4,000,000	85.80
Wilmar & Sioux Falls Ry. Co. - 1st mtge. bonds	5 %	3,625,000	100.00*
Spokane Falls & Northern Ry. Co. - 1st mtge. bonds	6 %	229,000	100.00*
Equipment Obligations			
G.N.Ry. Co. - Equip. Trust.Series "B" Ser.Trs.Cert.	5 %	3,450,000	100.00*
" " " " "C" " " "	4½%	2,100,000	100.00*
" " " " "D" " " "	4½%	1,986,000	100.00
Total (Exclusive of Series "A" Gen.Mtge.Gold bonds)		$247,284,515	
G.N.Ry. Co. - General Mortgage gold bonds, Series "A"	7 %	105,859,000	74.30
TOTAL ALL BONDS		353,143,515	
TOTAL STOCKS AND BONDS (Exclusive of Series "A")		496,003,565	
TOTAL ALL STOCKS AND BONDS		$ 601,862,565	

* Par value as of December 31, 1932 shown, as market value not available.

SOURCE: 1933 annual report of the Great Northern Railway Company to the State Tax Commissioner of

NOTE: Great Northern Series "A" gold bonds were issued to refinance the Great Northern's proporti collateral Trust Bonds. By reason of the issue of these bonds ownership of 48.59% of the stoc vested in the Great Northern Railway Company. The bonds are primarily a lien on this stock pledge of the stock. The amount originally issued was $115,000,000. On December 31, 1927, $9 7% bonds were retired leaving outstanding $105,859,000.

Table - 2 - (L. A. Baker)

Defendants' Exhibit A.

GREAT NORTHERN RAILWAY COMPANY

FUNDED DEBT OF THE GREAT NORTHERN RAILWAY COMPANY IN THE HANDS OF THE PUBLIC DECEMBER 31, 1932
IS AND MARKET VALUE FOR ONE YEAR AND FIVE YEAR PERIOD ENDED DECEMBER 31, 1932

	Par value outstanding Dec. 31, 1932	Average market value for the year ended December 31, 1932		Average market value for the five year period ended December 31, 1932	
		Average Quotations	Total market value	Average Quotations	Total market value
	$ 248,719,050	$ 13.20	$ 32,830,915	$ 69.90	$ 173,854,616
4½%	35,668,000	77.90	27,785,372	92.90	33,135,572
5%	30,000,000	64.00	19,200,000	98.30	29,490 000
5 %	15,000,000	61.00	9,150,000	93.90	14,085,000
4½%	15,000,000	55.90	8,385,000	87.10	13,065,000
4½%	40,000,000	56.00	22,400,000	86.90	34,760,000
6 %	13,344 000	96.50	12,876,960	102.40	13,664,256
4½%	20,797,000	93.80	19,507,586	98.40	20,464,248
4 %	7,822,000	94.00	7,352 680	96.70	7,563,874
4 %	10,185,000	85.00	8,657,250	93.20	9,482,420
4 %	28,383,515	75.30	21,372,787	87.60	24,863,959
4 %	9,695,000	80.20	7,775,390	91.90	8,909,705
6 %	6,000,000	92.20	5,532,000	104.20	6,252 000
5 %	4,000,000	85.80	3,432,000	98.30	3,932,000
5 %	3,625,000	100.00*	3,625,000*	100.70	3,650,375
6 %	229,000	100.00*	229,000	100.00*	229,000
5 %	3,450,000	100.00*	3,450,000*	100.00	3,450,000*
4½%	2,100,000	100.00*	2,100,000*	100.00*	2,100,000*
4½%	1,986,000	100.00	1,986,000*	100.00*	1,986,000*
	$247,284,515		$ 184,817,025		$ 231,093,409
7 %	105,859,000	74.30	78,653,237	103.00	109,034,770
	353,143,515		263,470,262		340,128,179

	Outstanding Dec. 31, 1932	December 31, 1932 Average Quotations	Total market value	Average Quotations	Total market value
	$ 248,719,050	$ 13.20	$ 32,830,915	$ 69.90	$ 173,854,616
4½%	35,668,000	77.90	27,785,372	92.90	33,135,572
5½%	30,000,000	64.00	19,200,000	98.30	29,490 000
5 %	15,000,000	61.00	9,150,000	93.90	14,085,000
4½%	15,000,000	55.90	8,385,000	87.10	13,065,000
4½%	40,000,000	56.00	22,400,000	86.90	34,760,000
6 %	13,344 000	96.50	12,876,960	102.40	13,664,256
4½%	20,797,000	93.80	19,507,586	98.40	20,464,248
4 %	7,822,000	94.00	7,352,680	96.70	7,563,874
4 %	10,185,000	85.00	8,657,250	93.20	9,482,420
4 %	28,383,515	75.30	21,372,787	87.60	24,863,959
4 %	9,695,000	80.20	7,775,390	91.90	8,909,705
6 %	6,000,000	92.20	5,532,000	104.20	6,252 000
5 %	4,000,000	85.80	3,432,000	98.30	3,932,000
5 %	3,625,000	100.00*	3,625,000*	100.70	3,650,375
6 %	229,000	100.00*	229,000	100.00*	229,000
5 %	3,450,000	100.00*	3,450,000*	100.00	3,450,000*
4½%	2,100,000	100.00*	2,100,000*	100.00*	2,100,000*
4½%	1,986,000	100.00	1,986,000*	100.00*	1,986,000*
	$247,284,515		$ 184,817,025		$ 231 093 409
7 %	105,859,000	74.30	78 653,237	103 00	109,034 770
	353,143,515		263,470 262		340,128,179
	496,003,565		217,647,940		404,948,025
	$ 601,862,565		$ 296,301,177		$ 513,982,795

lue not available.
y Company to the State Tax Commissioner of North Dakota.

to refinance the Great Northern's proportion of the Burlington-Northern Pacific-Great Northern these bonds ownership of 48.59% of the stock of the Chicago, Burlington and Quincy Railway Company is bonds are primarily a lien on this stock were issued to purchase said stock and are secured by the ms $115,000,000. O. December 31 1927, $9,141,000 principal amount of General mortgage series "A" 00.

draft E & B
B. M.

Table - 3 - (L. A. Baker)

GREAT NORTHERN RAILWAY COMPANY

AVERAGE MARKET VALUE OF STOCKS AND BONDS FOR THE YEARS 1924 to 1932, ALSO FOR THE FIVE YEAR
1929, 1930, 1931 AND 1932.

Year ended December 31,	Par Value all stocks and bonds outstanding	Average market value of: Capital Stock	Bonds - excluding Series "A" General Mortgage gold bonds	Total stocks and bonds - excluding Series "A" General Mortgage Gold Bonds	Series "A" ... Gold bonds (Bu... bonds) (1)
1924	$ 545,559,965	$ 153,428,447	$190,749,640	$344,178,087	$ 124,775
1925	567,783,065	174,739,418	197,001,995	371,741,413	126,500
1926	581,250,165	188,443,757	213,789,018	402,232,775	130,065
1927	590,596,155	231,041,608	238,257,866	469,299,474	121,208
1928	589,087,265	250,747,683	235,540,461	486,288,144	120,361
1929	585,798,965	269,146,785	224,352,323	493,499,109	116,127
1930	604,498,965	204,378,467	249,200,515	453,578,982	117,715
1931	603,172,865	112,489,850	237,038,802	349,528,652	112,316
1932	601,862,565	32,830,915	184,817,025	217,647,940	78,653
5 year period ended December 31.					
1926	581,250,165	175,748,075	208,139,424	383,887,499	126,270
1927	590,596,165	181,995,060	229,432,137	411,427,197	117,185
1928	589,087,265	199,701,729	230,537,619	430,239,348	118,495
1929	585,798,965	222,836,608	228,020,719	450,857,327	118,775
1930	604,498,965	228,774,436	247,886,991	476,661,427	118,985
1931	603,172,865	213,531,618	245,280,061	458,811,679	117,503
1932	601,862,565	173,854,616	231,093,409	404,948,025	109,054

(1) Bonds issued to purchase Burlington stock and secured by a pledge of such stock.

Year ended December 31,	Par Value all stocks and bonds outstanding	Average market value of: Capital Stock	Bonds - excluding Series "A" General mortgage gold bonds	Total stocks and bonds - excluding Series "A" General Mortgage Gold Bonds	Series "A" (mtge. Gold bonds (Burl: bonds) (1)
1924	$ 545,559,965	$ 153,428,447	$190,749,640	$344,178,087	$ 124,775,0
1925	567,783,065	174,739,418	197,001,995	371,741,413	126,500,0
1926	581,250,165	188,443,757	213,789,018	402,232,775	130,065,0
1927	590,596,155	231,041,608	238,257,866	469,299,474	121,208,5
1928	589,087,265	250,747,683	235,540,461	486,288,144	120,361,6
1929	585,798,965	269,146,785	224,352,323	493,499,108	116,127,3
1930	604,498,965	204,378,467	249,200,515	453,578,982	117,715,2
1931	603,172,865	112,489,850	237,038,802	349,528,652	112,316,3
1932	601,862,565	32,830,915	184,817,025	217,647,940	78,653,2
5 year period ended December 31.					
1926	581,250,165	175,748,075	208,139,424	383,887,499	126,270,0
1927	590,596,165	181,995,060	229,432,137	411,427,197	117,185,9
1928	589,087,265	199,701,729	230,537,619	430,239,348	118,456,2
1929	585,798,965	222,836,608	228,020,719	450,857,327	118,773,7
1930	604,498,965	228,774,436	247,886,991	476,661,427	118,985,5
1931	603,172,865	213,531,618	245,280,061	458,811,679	117,503,4
1932	601,862,565	175,854,616	231,093,409	404,948,025	109,034,7

(1) Bonds issued to purchase Burlington stock and secured by a pledge of such stock.

Source: Annual reports and special reports of the Great Northern Railway Company to the State Tax I

Defendants' Exhibit B.

Table - 3 - (L. A. Baker)

GREAT NORTHERN RAILWAY COMPANY

THE YEARS 1924 to 1932, ALSO FOR THE FIVE YEAR PERIODS ENDING DECEMBER 31, 1926, 1927, 1928, 1929, 1930, 1931 AND 1932.

Average market value of:				Increase (I) or Decrease (D) compared with previous year's total stock and bond value
Bonds - luding Series General tgage gold ds	Total stocks and bonds - excluding Series "A" General Mortgage Gold Bonds	Series "A" Gen. ...tge. Gold bonds (Burlington bonds) (1)	All Stocks and Bonds	
190,749,640	$344,178,087	$ 124,775,000	$ 468,953,087	---------
197,001,995	371,741,413	126,500,000	498,241,413	I 6.25%
213,789,018	402,232,775	130,065,000	532,297,775	I 6.84
238,257,866	469,299,474	121,208,555	590,508,029	I 10.94
235,540,461	486,288,144	120,361,683	606,649,827	I 2.73
224,352,323	493,499,108	116,127,323	609,626,431	I 0.49
249,200,515	453,578,982	117,715,208	571,294,190	D 6.29
237,038,802	349,528,652	112,316,399	461,845,051	D 19.16
184,817,025	217,647,940	78,653,237	296,301,177	D 35.84
208,139,424	383,887,499	126,270,000	510,157,499	---------
229,432,137	411,427,197	117,185,913	528,613,110	I 3.62
230,537,619	430,239,348	118,456,221	548,695,569	I 3.80
238,020,719	450,857,327	118,773,798	569,631,125	I 3.82
247,886,991	476,661,427	118,985,516	595,646,943	I 4.57
245,280,061	458,811,679	117,503,490	576,315,169	D 3.25
231,093,409	404,948,025	109,034,770	513,982,795	D 10.82

(1) ...cured by a pledge of such stock.

Average market value of:				Increase (I) or Decrease (D) compared with previous year's total stock and bond value
Bonds - uding Series General gage gold s	Total stocks and bonds - excluding Series "A" General Mortgage Gold Bonds	Series "A" General Mortgage Gold bonds (Burlington bonds) (1)	All Stocks and Bonds	
90,749,640	$344,178,087	$ 124,775,000	$ 468,953,087	----------
97,001,995	371,741,413	126,500,000	498,241,413	I 6.25%
13,789,018	402,232,775	130,065,000	532,297,775	I 6.84
38,257,866	469,299,474	121,208,555	590,508,029	I 10.94
35,540,461	486,288,144	120,361,683	606,649,827	I 2.73
24,352,323	493,499,108	116,127,323	609,626,431	I 0.49
49,200,515	453,578,982	117,715,208	571,294,190	D 6.29
37,038,802	349,525,652	112,316,399	461,845,051	D 19.16
84,817,025	217,647,940	78,653,237	296,301,177	D 35.84
08,139,424	383,887,499	126,270,000	510,157,499	----------
29,432,137	411,427,197	117,185,913	528,613,110	I 3.62
30,537,619	430,239,348	118,456,221	548,695,569	I 3.80
3,020,719	450,857,327	118,773,798	569,631,125	I 3.82
17,886,991	476,661,427	118,985,516	595,646,943	I 4.57
15,280,061	458,811,679	117,503,490	576,315,169	D 3.25
11,093,409	404,948,025	109,034,770	513,982,795	D 10.82

ured by a pledge of such stock.

eat Northern Railway Company to the State Tax Department of North Dakota.

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Defts. Ex. C
B. M.

Table — 4 — (L. A. Baker)

Great Northern Railway Company

Average Quotations on Stock, 1916–1932, Earnings Record and Dividend Record, 1916–1932 and Corporate Surplus at End of Years 1916–1932 Inclusive.

Year ended December 31	Average market quotations	Earned per share on capital Stock	Dividends declared		Corporate surplus at end of year
			Per share	Total	
1916	$ 121.25	$ 9.74	$ 7.00	$17,459,449	$106,511,552
1917	98.75	9.23	7.00	17,462,959	116,968,997
1918	96.25	7.53	7.00	17,462,842	114,936,578
1919	87.87	8.88	7.00	17,462,890	119,851,064
1920	78.56	7.74	7.00	17,462,916	122,749,921
1921	69.63	11.41	7.00	17,462,973	129,371,797
1922	80.70	4.36	5.25	13,097,264	129,371,798
1923	65.00	7.24	5.00	12,473,605	126,347,164
1924	61.50	7.19	5.00	12,473,617	132,134,125
1925	70.20	8.61	5.00	12,369,145	140,564,902
1926	75.70	10.42	5.00	12,445,855	154,439,241
1927	92.80	9.23	5.00	12,447,355	154,389,752
1928	100.70	10.11	5.00	12,449,205	162,499,526
1929	108.10	10.31	5.00	12,450,225	165,685,738
1930	82.10	7.25	7.50	18,673,035	164,905,196
1931	45.20	2.14	2.50	6,222,716	163,978,163
1932	13.20	Nil	.....	.....	149,260,003
Totals		$ 131.39	$92.25	$229,876,051	

Note: Authorized capital stock 2,500,000 shares, par value $100. or a total of $250,000,000. Amount issued to December 31, 1932 was $249,748,350 and amount in hands of the public was $248,719,050. The amount in hands of public has varied but little during period 1916–1932.

Source: Annual reports of Great Northern, 1922 to 1932. Moody's Investment Manual for prior years.

Table -6- (L. A. Baker)

GREAT NORTHERN RAILWAY COMPANY

STATEMENT SHOWING THE GROSS RECEIPTS, THE COST OF OPERATION AND THE INCOME RESULTING FROM OP

Year	Total operating income	Operating expenses	Net railway operating revenue	Taxes	Uncollectible	Net
1922	$ 143,452,937	$ 79,636,038	$ 23,816,899	$ 8,097,725	$ 15,874	$15,7
1923	120,077,771	86,730,523	33,347,248	9,113,227	20,382	24,1
1924	118,24[illegible],104	75,212,058	33,031,046	10,251,741	12,007	24,7
1925	114,924,960	75,827,288	39,097,672	9,801,946	7,944	29,8
1926	117,383,909	75,285,464	42,098,445	9,699,607	15,338	32,3
1927	117,904,005	78,358,580	39,548,425	9,046,049	238 Cr.	30,2
1928	126,737,091	83,235,116	43,501,975	10,297,997	13,916	33,1
1929	125,932,808	82,862,910	43,069,898	9,801,154	17,181	33,8
1930	[illegible]	[illegible]	[illegible]	8,712,598	[illegible]	27,7
1931	77,067,454	55,285,953	21,601,501	7,179,028	9,894	14,6
1932	55,549,247	45,655,673	9,893,574	6,697,424	14,[illegible]	3,1
Totals	$1,174,889,362	$ 810,672,481	$363,616,881	$ 98,104,696	$136,784 Dr.	$265,

STATEMENT SHOWING NET RAILWAY OPERATING INCOME, NONOPERATING INCOME, INCOME DEDUC
FOR THE ELEVEN YEAR PERIOD ENDING DECEMBER 31, 19[illegible]

Year	Net railway operating income	Nonoperating income	Gross income	Interest deductions on funded debt
1922	$ 17,276,598	$ 10,487,006	$ 27,763,604	$ 16,842,953
1923	24,731,992	5,085,539	29,817,531	16,348,339
1924	24,281,287	11,653,877	35,935,164	17,187,197
1925	28,276,183	11,428,248	39,704,431	17,591,927
1926	31,880,429	13,175,670	44,456,099	17,911,341
1927	29,[illegible],548	12,[illegible],273	42,048,813	18,349,499
1928	31,894,849	13,032,123	44,326,198	18,597,673
1929	32,457,523	12,026,227	44,483,750	18,220,132

1922	$ 143,482,937	$ 79,636,038	$ 23,816,899	$ [illegible]	$ [illegible]	[illegible]
1923	120,077,771	86,790,583	23,267,[illegible]	[illegible]	[illegible]	[illegible]
1924	118,21[illegible],104	73,212,[illegible]	25,[illegible]	[illegible]	[illegible]	[illegible]
1925	114,924,960	75,827,288	39,097,672	[illegible]	[illegible]	[illegible]
1926	117,383,909	73,285,464	42,098,445	9,692,697	[illegible]	[illegible]
1927	117,504,005	78,155,580	39,548,425	9,046,849	[illegible]	[illegible]
1928	126,737,091	83,235,116	43,501,975	10,297,977	13,[illegible]	[illegible]
1929	125,932,808	82,862,918	43,069,[illegible]	9,881,154	17,161	[illegible]
1930	104,996,976	72,565,878	32,430,198	8,712,598	[illegible]	[illegible]
1931	77,087,434	55,285,953	21,801,501	7,179,028	9,894	[illegible]
1932	55,549,247	45,655,673	9,[illegible],574	6,697,424	14,[illegible]	[illegible]
Totals	$1,174,889,362	$ 810,672,481	$363,616,881	$ 98,104,696	$136,784	[illegible]

STATEMENT SHOWING NET RAILWAY OPERATING INCOME, NONOPERATING INCOME, INCOME DEDUCT
FOR THE ELEVEN YEAR PERIOD ENDING DECEMBER 31, 193[illegible]

Year	Net railway operating income	Nonoperating income	Gross income	Interest deductions
1922	$ 17,276,598	$ 10,487,006	$ 27,763,604	$ 16,242,953
1923	24,731,992	5,085,539	29,817,531	16,348,339
1924	24,261,287	11,653,877	35,855,164	17,187,797
1925	28,276,183	11,428,248	39,704,431	17,591,987
1926	31,280,429	13,173,670	44,456,099	17,971,341
1927	29,[illegible],[illegible]	12,[illegible],273	42,[illegible],813	18,349,499
1928	31,894,869	13,032,123	44,926,192	18,397,673
1929	32,467,523	12,[illegible],227	44,483,750	18,220,132
1930	21,[illegible],508	15,528,317	37,440,825	18,641,072
1931	12,[illegible],[illegible]	12,110,637	24,780,057	18,992,022
1932	1,[illegible],551	5,096,[illegible]	6,386,643	18,933,207
Totals	$254,593,180	$122,462,[illegible]	$377,[illegible],109	$196,835,962

Source: Annual or special reports of the Great Northern Railway Company to State Tax C

Defendants' Exhibit D.

Table -6- (L. A. Baker).

GREAT NORTHERN RAILWAY COMPANY

OPERATION AND NET INCOME RESULTING FROM OPERATION FOR THE ELEVEN YEARS ENDED DECEMBER 31, 1932

...ing	Taxes	Uncollectible ... expenses	Railway operating income	Hire of equipment (net balance)	Joint facility rents (net balance)	Net railway operating income
895	$4,897,725	$ 15,574	$15,703,640	$1,739,083 Cr.	$226,065 Dr.	$ 17,276,598
248	9,113,227	20,982	24,193,039	806,631 Cr.	267,679 Dr.	24,731,992
846	10,891,741	12,867	24,761,038	304,289 Dr.	255,482 Dr.	24,201,287
672	9,801,946	7,844	29,287,862	726,135 Dr.	285,564 Dr.	28,276,183
445	9,699,607	15,339	32,383,899	808,498 Dr.	294,772 Dr.	31,280,429
485	9,046,849	228 Cr.	30,602,604	994,896 Dr.	302,168 Dr.	29,208,540
973	10,297,997	13,916	33,190,862	1,517,997 Dr	377,996 Dr.	31,294,869
898	9,801,154	17,181	33,851,563	991,449 Dr.	408,591 Dr.	32,457,523
198	8,712,598	9,845	23,707,755	1,347,804 Dr.	447,443 Dr.	21,912,508
581	7,179,028	2,894	14,612,579	1,454,238 Dr.	486,921 Dr.	12,669,420
574	6,697,424	14,8	3,181,940	1,513,915 Dr.	377,474 Dr.	1,290,551
881	$ 98,104,696	$136,764 Dr.	$265,375,401	$7,053,547 Dr.	$3,728,755 Dr.	$254,593,100

INCOME, NONOPERATING INCOME, INCOME DEDUCTIONS AND NET CORPORATE INCOME OR DEFICIT
ELEVEN YEAR PERIOD ENDING DECEMBER 31, 1932

Gross income	Interest deductions on funded debt	Other deductions	Net income
$ 27,763,604	$ 16,242,953	$654,979	$10,865,672
29,817,811	16,348,539	628,966	12,840,226
35,828,184	17,187,797	725,767	17,941,600
39,704,431	17,591,927	677,108	21,435,396
44,456,029	17,931,341	581,981	25,943,857
42,049,811	18,349,499	705,391	22,995,923
44,326,192	18,397,673	760,890	25,168,229

,895	$ 4,697,725	$ 15,534	$15,703,640	$1,799,023 Cr.	$226,065 Dr.	$ 17,276,598
,848	9,113,227	20,962	24,193,039	806,631 Cr.	267,679 Dr.	24,731,992
,846	10,291,741	12,867	24,761,038	304,269 Dr.	253,482 Dr.	24,801,287
,672	9,801,946	7,844	29,287,882	726,135 Dr.	285,564 Dr.	28,276,183
,445	9,699,607	15,339	32,383,299	808,498 Dr.	294,372 Dr.	31,280,429
,425	9,046,049	228 Cr.	30,502,604	994,896 Dr.	305,168 Dr.	29,202,540
,973	10,297,997	13,916	33,190,062	1,517,997 Dr	377,996 Dr.	31,294,069
,898	9,201,154	17,181	33,851,563	991,449 Dr.	402,391 Dr.	32,457,523
,198	8,712,598	9,845	23,707,755	1,347,804 Dr.	447,443 Dr.	21,912,508
,501	7,179,028	9,894	14,612,579	1,454,238 Dr.	488,921 Dr.	12,669,420
,574	6,697,424	14,?	3,181,940	1,513,915 Dr.	377,474 Dr.	1,290,551
,881	$ 98,104,696	$136,784 Dr.	$265,375,401	$7,053,547 Dr.	$3,728,755 Dr.	$254,593,100

INCOME, NONOPERATING INCOME, INCOME DEDUCTIONS AND NET CORPORATE INCOME OR DEFICIT
ELEVEN YEAR PERIOD ENDING DECEMBER 31, 1932

Gross income	Interest deductions on funded debt	Other deductions	Net income
$ 27,763,604	$ 16,242,953	$654,979	$10,865,672
29,817,531	16,348,339	628,966	12,840,226
35,855,164	17,187,797	725,767	17,941,600
39,704,431	17,591,927	677,108	21,435,396
44,456,099	17,931,341	581,501	25,943,257
42,040,813	18,349,499	705,391	22,985,923
44,326,192	18,397,673	760,290	25,168,229
44,483,750	18,220,132	595,067	25,668,551
37,440,825	18,841,072	763,005	18,036,748
24,780,057	18,992,022	462,128	5,325,907
6,386,643	18,933,207	858,875	13,405,439(Deficit)
$377,055,109	$196,835,962	$7,413,077	$172,806,070

...st Northern Railway Company to State Tax Commissioner.

323 Defts. Ex. E

B. M.

Table — 7 — (L. A. Baker)

Valuation of Great Northern Railway Property in 1929, 1930, 1931, 1932 and 1933 as Reflected by Capitalization of Company's Net Railway Operating Income for Five Year Periods Preceding The Assessment Year.

Five year period preceding assessment	Average net railway operating income for five year period	Average net railway operating income capitalized at 6%	Average net railway operating income capitalized at 5%
1929	$ 28,850,902	$ 480,848,367	$ 577,018,040
1930	30,502,149	508,369,150	610,042,980
1931	29,229,414	487,156,900	584,588,280
1932	25,507,212	425,120,200	510,144,240
1933	19,924,814	332,080,233	398,496,280

Source: Derived from reports of the company to Tax Commissioner of North Dakota.

Schedule Showing Rate Earned on Average Market Price of Stocks and Bonds for The Years 1928 – 1932

Year	Stock and Bond value	Gross income	Ratio
1928	$ 606,649,827	$44,326,192	7.31%
1929	609,626,431	44,483,750	7.30
1930	571,294,190	37,440,825	6.55
1931	461,845,051	24,780,057	5.37
1932	296,301,177	6,386,643	2.16

Table 8 (L. A. Baker

GREAT NORTHERN RAILWAY COMPANY

STATEMENT SHOWING COMPARATIVE INVESTMENT IN OPERATING AND NONOPERATING PROPERTY AT

Schedule 1.

Statement showing comparative investment in operating and nonoperating pr
to 1932 inclusive, as reported in annual reports to stockholders in which
companies operated as a part of the Great Northern system are reported un
ating property.

End of year	OPERATING PROPERTY		NONOPERATING PROPERTY		
	Road and Equipment (1)	Stocks	Bonds	Other securities	Ot prop
1926	$ 480,883,384	$193,070,054	$28,957,930	$26,134,420	$5,454,
1927	494,491,314	186,246,255	28,983,212	30,675,670	3,482,
1928	524,046,086	172,633,296	28,985,212	33,411,641	3,692,
1929	519,814,755	171,307,566	29,100,507	40,962,949	3,904,
1930	527,200,562	172,022,164	29,051,507	44,449,083	4,205,
1931	535,080,940	172,931,659	31,237,886	49,556,383	4,270,
1932	535,850,784	173,000,759	27,349,246	49,912,286(3)	4,330,

Schedule 2.

Statement showing comparative investment in operating and nonoperating p
1926 to 1932 inclusive, with wholly owned subsidiary companies operated as a
included under operating property.

End of year	Road and Equipment	NONOPERATING CAPITAL ASSETS		
		Locally assessed real estate (3)	Other property	Total
1926	$ 524,730,804	$ 8,300,000	$ 201,469,060	$ 209,769,060
1927	538,423,754	8,300,000	197,155,628	205,456,628
1928	559,263,851	8,300,000	195,204,920	203,504,920
1929	561,905,980	8,300,000	194,884,790	203,184,790
1930	571,918,242	8,291,335	196,718,847	205,000,182
1931	580,715,630	8,306,850	204,054,512	212,361,362
				207,198,876

Statement showing comparative investment in operating [illegible] to 1932 inclusive, as reported in annual reports to stockholders in which companies operated as a part of the Great Northern system are reported [illegible] ating property.

End of year	OPERATING PROPERTY: Road and Equipment (1)	Stocks	Bonds	NONOPERATING PROPERTY: Other securities	[illegible]
1926	$ 480,883,384	$193,070,054	$28,957,930	$26,134,420	$5,454
1927	494,491,314	186,246,255	28,983,212	30,675,670	3,482
1928	524,046,086	172,633,296	28,985,212	33,411,641	3,692
1929	519,814,755	171,307,566	29,100,507	40,962,949	3,904
1930	527,200,562	172,022,164	29,051,507	44,449,083	4,205
1931	535,080,940	172,931,659	31,237,886	49,556,383	4,270
1932	535,850,784	173,000,759	27,349,246	49,912,286(3)	4,330

Schedule 2.

Statement showing comparative investment in operating and nonoperating 1926 to 1932 inclusive, with wholly owned subsidiary companies operated as a included under operating property.

End of year	Road and Equipment	NONOPERATING CAPITAL ASSETS: Locally assessed real estate (3)	Other property	Total
1926	$ 524,730,804	$ 8,300,000	$ 201,469,060	$ 209,769,060
1927	538,423,754	8,300,000	197,155,628	205,455,628
1928	559,263,851	8,300,000	195,204,920	203,504,920
1929	561,905,980	8,300,000	194,884,790	203,184,790
1930	571,918,242	8,291,335	196,718,847	205,000,182
1931	580,715,630	8,306,850	204,054,512	212,361,362
1932	583,244,949	6,500,000	200,698,876	207,198,876

(1) Amounts invested in wholly owned subsidiary companies operated as a part of the Gre property in Schedule 1, and with operating property in Schedule 2.
(2) Included under head of other securities are notes, and advances to other companies. $3,576,039 and advances amounted to $45,219,649 (Schedule 1.)
(3) Carried on books of company under "Investment in Road and Equipment" but is locally
NOTE: Schedule 1 shows the general nature of nonoperating assets and Schedule 2 is int compute theshare of stock and bond values assignable to nonoperating property on t

Source: General Balance sheets in reports to stockholders and from annual reports to T

Defendants' Exhibit F.

Table 8 (L. A. Baker

GREAT NORTHERN RAILWAY COMPANY

IN OPERATING AND NONOPERATING PROPERTY AT END OF YEARS 1926 TO 1932 INCLUSIVE

Schedule 1.

investment in operating and nonoperating property at end of years 1926
in annual reports to stockholders in which wholly owned subsidiary
f the Great Northern system are reported under investments in nonoper-

NONOPERATING PROPERTY				
Bonds	Other securities	Other property	Total (2)	Total investment in all property
$28,957,930	$26,134,420	$5,454,075	$253,616,478	$ 734,499,863
28,983,212	30,675,670	3,482,931	249,388,068	743,879,382
28,985,212	33,411,641	3,692,535	248,722,684	762,768,770
29,100,507	40,962,949	3,904,992	245,276,014	765,090,769
29,051,507	44,449,083	4,205,108	249,727,862	776,928,424
31,237,886	49,556,383	4,270,124	257,996,852	793,076,992
27,349,246	49,912,286(3)	4,330,751	254,593,042	790,443,826

Schedule 2.

investment in operating and nonoperating property at end of years
owned subsidiary companies operated as a part of the Great Northern System
luded under operating property.

NONOPERATING CAPITAL ASSETS		Total Capital assets	Ratio of nonoperating assets to total
Other property	Total		
$ 201,469,060	$ 209,769,060	$734,499,864	27.43
197,155,628	205,455,628	743,879,382	27.62
195,204,980	203,504,920	762,768,771	26.68
194,884,790	203,184,790	765,090,770	26.56
196,718,847	205,000,182	776,928,424	26.39
204,654,512	212,361,362	793,076,992	26.78
[illegible]	207,198,876	790,443,825	26.21

in annual reports to stockholders in which wholly owned subsidiary
f the Great Northern system are reported under investments in nonoper-

NONOPERATING PROPERTY				Total investment in all property
Bonds	Other securities	Other property	Total (2)	
$28,957,930	$26,134,420	$5,454,075	$253,616,478	$ 734,499,863
28,983,212	30,675,670	3,482,931	249,388,068	743,879,382
28,985,212	33,411,641	3,692,535	248,722,684	762,768,770
29,100,507	40,962,949	3,904,992	245,276,014	765,090,769
29,051,507	44,449,083	4,205,108	249,727,862	776,928,424
31,237,886	49,556,383	4,270,124	257,996,052	793,076,992
27,349,246	49,912,286(3)	4,330,751	254,593,042	790,443,826

Schedule 2.

investment in operating and nonoperating property at end of years
owned subsidiary companies operated as a part of the Great Northern System
luded under operating property.

NONOPERATING CAPITAL ASSETS			Ratio of nonoperating assets to total
Other property	Total	Total Capital assets	
$ 201,469,060	$ 209,769,060	$734,499,864	27.43%
197,155,628	205,455,628	743,879,382	27.62
195,204,920	203,504,920	762,768,771	26.68
194,884,790	203,184,790	765,090,770	26.56
196,718,847	205,000,182	776,928,424	26.39
204,654,512	212,361,762	793,076,992	26.78
200,698,876	207,198,876	790,443,825	26.21

y companies operated as a part of the Great Northern system are included with nonoperating
property in Schedule 2.
e notes, and advances to other companies. As of December 31, 1932 notes amounted to
,649 (Schedule 1.)
nt in Road and Equipment" but is locally assessed the same as other real estate.
nonoperating assets and Schedule 2 is intended to present the basic figures necessary to
assignable to nonoperating property on the basis of relative investment.

tockholders and from annual reports to Tax Commissioner of North Dakota.

Table 9 -- (L. A. Baker)

GREAT NORTHERN RAILWAY COMPANY

STATEMENT SHOWING THE NONOPERATING INCOME FOR THE GREAT NORTHERN RAILWAY COMPANY FROM V

Year ended Dec. 31	SOURCE OF INCOME				
	Income from lease of road	Miscellaneous rent income	Miscellaneous nonoperating physical property	Dividend income	Income from funded securities
1923	$ 1,458.58	$ 512,659.19	$ 58 025.59	$ 8,403,519.37	$ 552,287.05
1924	35,542.66	508,119.18	24,666.19	9,287,584.26	1,137,522.8
1925	4,581.88	590,913.88	69,917.22	9,310,874.63	807,706.3
1926	1,727.52	502,631.23	101,096.28	9,472,726.99	2,316,394.0
1927	1,581.27	630,518.15	69,318.09	9,663,282.95	1,311,274.0
1928	1,497.52	658,961.48	163,913.48	9,771,836.46	872,[illegible]
1929	1,427.52	687,719.87	189,317.69	9,363,567.09	985,259.8
1930	1,427.52	672,612.32	190,530.97	13,285,672.32	554,376.5
1931	1,427.52	667,282.57	166,934.36	9,201,614.76	1,151,748.3
1932	777.36	650,235.08	165,314.98	3,047,898.44	656,305.9
Totals	$51,449.35	$6,081,652.95	$ 1,159,034.85	$90,808,577.27	$ 10,345,600.9
Ratio derived from each source over 10 year period	0.04%	5.19%	0.99%	77.48%	8.83%

Year ended Dec. 31	SOURCE OF INCOME				
	Income from lease of road	Miscellaneous rent income	Miscellaneous nonoperating physical property	Dividend income	Income from funded securities
1923	$ 1,458.58	$ 512,659.19	$ 58 025.59	$ 8,403,519.37	$ 552,287.05
1924	35,542.66	508,119.18	24,666.19	9,287,584.26	1,137,522.83
1925	4,581.88	590,913.88	69,917.22	9,310,874.63	807,706.37
1926	1,727.52	502,631.23	101,096.28	9,472,726.99	2,316,394.01
1927	1,581.27	630,518.15	69,318.09	9,663,282.95	1,311,274.02
1928	1,497.52	658,961.48	165,913.48	9,771,836.46	872,[illegible]21.11
1929	1,427.52	687,719.87	189,317.69	9,363,567.09	985,259.81
1930	1,427.52	672,612.32	190,530.97	13,285,672.32	554,376.52
1931	1,427.52	667,282.57	166,934.36	9,201,614.76	1,151,748.34
1932	777.36	650,235.08	165,314.98	3,047,898.44	656,305.91
Totals	$51,449.35	$6,081,652.95	$ 1,159,034.85	$90,808,577.27	$ 10,345,600.97
Ratio derived from each source over 10 year period	0.04%	5.19%	0.99%	77.48%	8.83%

Defendants' Exhibit G.

Table 9 (L. A. Baker)

GREAT NORTHERN RAILWAY COMPANY

THE GREAT NORTHERN RAILWAY COMPANY FROM VARIOUS SOURCES FOR THE YEARS 1923 TO 1932 INCLUSIVE.

	SOURCE OF INCOME				
...eous ...ing L...	Dividend income	Income from funded securities	Income from unfunded securities and accounts	Miscellaneous income	Total nonoperating income
...5.59	$ 8,403,519.37	$ 552,287.05	$ 440,670.33	$ 344,640.66	$ 10,313,260.77
...6.19	9,287,584.26	1,137,522.83	459,540.91	200,901.40	11,653,877.43
...7.22	9,310,874.63	807,706.37	438,911.36	205,343.05	11,428,248.39
...6.28	9,472,726.99	2,316,394.01	568,640.62	212,453.84	13,175,670.49
...8.09	9,663,282.95	1,311,274.02	906,001.37	256,296.90	12,838,272.75
...3.48	9,771,836.46	872,921.11	1,373,170.53	190,017.46	13,032,123.04
...7.69	9,363,567.09	985,259.81	595,023.08	243,911.82	12,026,226.88
...0.97	13,285,672.32	554,376.52	582,616.63	241,081.07	15,528,317.35
...4.36	9,201,614.76	1,151,748.34	667,342.27	254,286.68	12,110,636.50
...4.98	3,047,898.44	656,305.91	367,835.40	207,724.43	5,096,091.60
...4.85	$90,808,577.27	$ 10,345,600.97	$ 6,399,752.50	$ 2,356,657.31	$117,202,725.20
0.99%	77.48%	8.83%	5.46%	2.01%	100%

SOURCE OF INCOME

llaneous rating l f I	Dividend income	Income from funded securities	Income from unfunded securities and accounts	Miscellaneous income	Total nonoperating income
025.59	$ 8,403,519.37	$ 552,287.05	$ 440,670.33	$ 344,640.66	$ 10,313,260.77
,666.19	9,287,584.26	1,137,522.83	459,540.91	200 901.40	11,653,877.43
,917.22	9,310,874.63	807,706.37	438,911.36	205,343.05	11,428,248.39
,096.28	9,472,726.99	2,316,394.01	568,640.62	212,453.84	13,175,670.49
,318.09	9,663,282.95	1,311,274.02	906,001.37	256,296.90	12,838,272.75
,913.48	9,771,836.46	872,421.11	1,373,170.53	190,017.46	13,032,123.04
,317.69	9,363,567.09	985,259.81	595,023.08	243,911.82	12,086,226.88
,530.97	13,285,672.32	554,376.52	582,616.63	241,081.07	15,528,317.35
,934.36	9,201,614.76	1,151,748.34	667,342.27	254,286.68	12,110,636.50
,314.98	3,047,898.44	656,305.91	367,835.40	207,724.43	5,096,091.60
,034.85	$90,808,577.27	$ 10,345,600.97	$ 6,399,752.50	$ 2,356,657.31	$117,202,725.20
	0.99%	77.48%	8.83%	5.46%	2.01%	100%

BISMARCK TRIBUNE 31281

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Defts. Ex. H.

B. M.

Table — 10 — (L. A. Baker)

Great Northern Railway Company

Statement of Net Railway Operating Income and Nonoperating Income for The Years 1922 to 1932 Inclusive, Also a Comparison for The Seven Year Periods Ended December 31, 1928, 1929, 1930, 1931 and 1932

Year ended December 31	Net railway operating income	Nonoperating income	Total
1922	$ 17,276,598	$ 10,487,006	$27,763,604
1923	24,731,992	5,085,539	29,817,531
1924	24,201,287	11,653,877	35,855,164
1925	28,276,183	11,428,248	39,704,431
1926	31,280,429	13,175,670	44,456,099
1927	29,202,540	12,838,273	42,040,813
1928	31,294,069	13,032,123	44,326,192
1929	32,457,523	12,026,227	44,483,750
1930	21,912,508	15,528,317	37,440,825
1931	12,669,420	12,110,637	24,780,057
1932	1,290,551	5,096,092	6,386,643

Seven year period ended December 31	Average net railway operating income	Average nonoperating income	Total	Ratio of nonoperating income to total
1928	$ 26,609,014	$11,100,105	$37,709,119	29.44%
1929	28,777,717	11,319,994	40,097,711	28.23
1930	28,374,934	12,811,819	41,186,753	31.11
1931	26,727,524	12,877,071	39,604,595	32.51
1932	22,872,434	11,972,477	34,844,911	34.36

Table 11 - (L. A. Baker)

GREAT NORTHERN RAILWAY COMPANY

APPORTIONMENT OF STOCK AND BOND VALUE TO OPERATING AND NONOPERATING PROPERTY

Assessment year	Market value of stocks and bonds 5 year average preceding assessment year	Ratio of nonoperating income to total income - 7 year average	Ratio of nonoperating assets to total capital assets December 31, preceding assessment year	Composite ratio
1929	$548,693,569	29.44%	26.68%	28.06%
1930	569,631,125	28.23	26.56	27.39
1931	595,646,943	31.11	26.39	28.75
1932	576,315,169	32.51	26.78	29.65
1933	543,982,795	34.36	26.21	30.29

Source: Stock and bond values as reported by Great Northern Railway to North Dakota Ta

GREAT NORTHERN RAILWAY COMPANY

APPORTIONMENT OF STOCK AND BOND VALUE TO OPERATING AND NONOPERATING PROPERTY

Assessment year	Market value of stocks and bonds 5 year average preceding assessment year	Ratio of nonoperating income to total income - 7 year average	Ratio of nonoperating assets to total capital assets, December 31, preceding assessment year	Composite ratio
1929	$548,693,569	29.44%	26.60%	28.06%
1930	569,631,125	28.23	26.56	27.39
1931	595,646,943	31.11	26.39	28.75
1932	576,315,169	32.51	26.78	29.65
1933	543,982,795	34.36	26.21	30.29

Source: Stock and bond values as reported by Great Northern Railway to North Dakota Tax

Defendants' Exhibit I.

Table - 11 - (L. A. Baker)

GREAT NORTHERN RAILWAY COMPANY

D VALUE TO OPERATING AND NONOPERATING PROPERTY - YEARS 1929 TO 1933, INCLUSIVE

Ratio of operating to total - 7 year	Ratio of nonoperating assets to total capital assets, December 31, preceding assessment year	Composite ratio	Stock and bond value assigned to nonoperating property by composite ratio	Stock and bond value assigned to operating property (Total less amount assigned to nonoperating property)
.44%	26.60%	28.06%	$153,963,977	$394,731,592
.23	26.56	27.39	156,021,965	413,609,160
.11	26.39	28.75	171,248,496	424,398,447
.51	26.78	29.65	170,877,448	405,437,721
.36	26.21	30.29	155,685,389	358,297,406

by Great Northern Railway to North Dakota Tax Commissioner.

GREAT NORTHERN RAILWAY COMPANY

VALUE TO OPERATING AND NONOPERATING PROPERTY - YEARS 1929 TO 1933, INCLUSIVE

o of rating to total - 7 year	Ratio of nonoperating assets to total capital assets, December 31, preceding assessment year	Composite ratio	Stock and bond value assigned to nonoperating property by composite ratio	Stock and bond value assigned to operating property (Total less amount assigned to nonoperating property)
.44%	26.68%	28.06%	$153,963,977	$394,731,592
.23	26.56	27.39	156,021,965	413,609,160
.11	26.39	28.75	171,248,496	424,398,447
.51	26.78	29.65	170,877,448	405,437,721
.36	26.21	30.29	155,685,389	358,297,406

by Great Northern Railway to North Dakota Tax Commissioner.

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Defts. Ex. J.

B. M.

Table — 12 — (L. A. Baker)

Great Northern Railway Company

Comparison of Freight Traffic Density Per Mile of All Tracks Operated on Entire System and in The State of North Dakota for The Years 1926 To 1933 Inclusive.

Year	Miles of all tracks operated at end of year	Ton miles of Revenue Freight	
		Total	Average per mile of all tracks operated
	System		
1926	11,656.89	8,902,970,446	763,752
1927	11,643.72	8,958,349,961	769,371
1928	11,895.26	10,127,253,509	851,368
1929	11,868.58	10,150,709,921	855,259
1930	11,935.54	8,720,583,904	730,640
1931	11,924.24	6,151,063,399	515,845
1932	12,049.56	4,324,700,394	358,909
1933	11,936.04	5,431,602,934	455,059
	State of North Dakota		
1926	2,370.01	1,562,613,140	659,328
1927	2,362.76	1,653,329,407	699,745
1928	2,375.44	2,047,255,759	861,843
1929	2,396.54	1,764,278,588	736,177
1930	2,408.15	1,587,079,064	659,045
1931	2,407.84	1,168,970,768	485,485
1932	2,404.83	910,222,371	378,498
1933	2,400.98	1,078,295,209	449,106

Revenue Ton Miles per Mile of all Tracks operated

Year	System	State of North Dakota	Ratio
1926	763,752	659,328	86.33%
1927	769,371	699,745	90.95
1928	851,368	861,843	101.23
1929	855,259	736,177	86.08
1930	730,640	659,045	90.20
1931	515,845	485,485	94.11
1932	358,909	378,498	105.46
1933	455,059	449,106	98.69

Source: Taken from I. C. C. Statistics of Railways and from Annual Reports of Great Northern Railway Company.

Duffy & K. B. M.

Table - 13 - (L. A. Baker

GREAT NORTHERN RAILWAY COMPANY

STATISTICS OF OPERATION PER MILE OF TRACK, 1926 -

Year	SYSTEM				NORTH DAKOTA		
	Miles of track operated at end of year	Per mile of all tracks			Miles of track operated at end of year	Per mile of al	
		Operating revenue	Traffic units (1)	Car and locomotive miles		Operating revenue	Traffic units (1)
1926	11,656.89	$10,070	798,882	56,853	2,370.01	$8,932	692,606
1927	11,643.72	10,126	803,774	55,980	2,362.76	9,300	733,341
1928	11,895.26	10,654	882,325	59,257	2,375.44	10,480	891,050
1929	11,868.58	10,611	886,263	58,239	2,396.54	9,398	765,436
1930	11,935.54	8,797	755,103	51,425	2,408.15	7,758	682,690
1931	11,924.24	6,465	533,944	40,027	2,407.84	5,765	500,690
1932	12,049.56	4,610	372,541	30,933	2,404.83	4,367	390,077
5 year period ended Dec. 31							
1930	11,935.54	9,936	816,019	55,707	2,408.15	9,073	744,907
1931	11,924.24	9,269	767,387	52,649	2,407.84	8,468	708,796
1932	12,049.56	8,138	678,574	47,469	2,404.83	7,525	643,597

Year	SYSTEM				NORTH DAKOTA		
	Miles of track operated at end of year	Per mile of all tracks			Miles of track operated at end of year	Per mile of all	
		Operating revenue	Traffic units (1)	Car and locomotive Miles		Operating revenue	Traffic units (1)
1926	11,656.89	$10,070	798,882	56,853	2,370.01	$8,932	692,606
1927	11,643.72	10,126	803,774	55,980	2,362.76	9,300	733,341
1928	11,895.26	10,654	882,325	59,257	2,375.44	10,480	891,050
1929	11,868.58	10,611	886,263	58,239	2,396.54	9,398	765,436
1930	11,935.54	8,797	755,103	51,425	2,408.15	7,758	682,690
1931	11,924.24	6,465	533,944	40,027	2,407.84	5,765	500,690
1932	12,049.56	4,610	372,541	30,933	2,404.83	4,367	390,077
5 year period ended Dec. 31							
1930	11,935.54	9,936	816,019	55,707	2,408.15	9,073	744,907
1931	11,924.24	9,269	767,387	52,649	2,407.84	8,468	708,796
1932	12,049.56	8,138	678,574	47,469	2,404.83	7,525	643,597

(1) Traffic units is a composite factor made up of revenue passengers carried one mile and tons of

Source: Derived from data contained in the annual reports of the Great Northern Railway Company t
Commissioners of North Dakota and from annual reports of the company to stockholders.

Defendants' Exhibit K.

Table - 13 - (L. A. Baker

GREAT NORTHERN RAILWAY COMPANY

RATIOS OF OPERATION PER MILE OF TRACK, 1926 - 1932

	NORTH DAKOTA				Ratio of North Dakota to entire line -			
	Miles of track operated at end of year	Per mile of all tracks			Operating revenue	Traffic units	Car and locomotive miles	Composite ratio
		Operating revenue	Traffic units (1)	Car and locomotive miles				
1926	2,370.01	$8,932	692,606	53,696	88.70%	86.70%	94.45%	89.95%
1927	2,362.76	9,300	733,341	54,305	91.84	91.24	97.01	93.36
1928	2,375.44	10,480	891,050	51,805	98.37	101.39	104.30	101.55
1929	2,396.54	9,398	765,436	55,454	88.57	86.37	95.22	90.95
1930	2,408.15	7,758	682,690	49,903	88.19	90.41	97.94	91.88
1931	2,407.84	5,765	500,690	40,008	89.17	93.77	99.95	94.30
1932	2,404.83	4,367	390,077	31,932	94.73	104.71	103.23	100.89
1927	2,408.15	9,073	744,907	54,437	91.31	91.29	97.72	93.44
1929	2,407.84	8,468	708,796	51,875	91.36	98.36	98.53	94.98
1932	2,404.83	7,525	643,597	47,655	92.47	94.85	100.39	95.90

and motive s	NORTH DAKOTA: Miles of track operated at end of year	NORTH DAKOTA: Per mile of all tracks: Operating revenue	Traffic units (1)	Car and locomotive miles	Ratio of North Dakota to entire line: Operating revenue	Traffic units	Car and locomotive miles	Composite ratio
853	2,370.01	$8,932	692,606	53,696	88.70%	86.70%	94.45%	89.93%
980	2,362.76	9,300	733,341	54,305	91.94	91.24	97.01	93.36
257	2,375.44	10,480	891,050	51,805	98.37	101.39	104.39	101.55
239	2,396.54	9,398	765,436	55,454	88.57	86.37	95.22	90.05
425	2,408.15	7,758	682,690	49,903	88.19	90.41	97.94	91.88
027	2,407.84	5,765	500,690	40,008	89.17	93.77	99.95	94.30
933	2,404.83	4,367	390,077	31,932	94.73	104.71	103.23	100.89
707	2,408.15	9,073	744,907	54,437	91.31	91.29	97.72	93.44
649	2,407.84	8,468	708,796	51,875	91.36	92.36	98.53	94.08
869	2,404.83	7,525	643,597	47,655	92.47	94.85	100.39	95.90

ume passengers carried one mile and tons of revenue freight carried one mile.

orts of the Great Northern Railway Company to the State Tax Commissioner and Board of Railroad
eports of the company to stockholders.

329 Defts. Ex. L.

B. M.

Table — 14 — (L. A. Baker)

Great Northern Railway Company

Comparison of Net Operating Revenues for System and State of North Dakota

Year	System			
	Operating revenues	Operating expenses	Operating ratio	Net revenues
1925	$114,924,960	$ 75,827,285	66.00%	$ 39,097,672
1926	117,383,909	75,285,464	64.14	42,098,445
1927	117,904,004	78,355,579	66.46	39,548,425
1928	126,737,091	83,235,116	65.67	43,501,975
1929	125,932,808	82,862,910	65.80	43,069,898
1930	104,996,076	72,565,878	69.11	32,430,198
1931	77,087,455	55,285,953	71.72	21,801,501
1932	55,549,246	45,655,673	82.19	9,893,574
Average — 8 year period	105,064,443	71,134,232	67.71	33,930,211
Average per mile of track operated	$ 8,719	$ 5,903		$ 2,816

Year	North Dakota			
	Operating revenues	Operating expenses	Operating ratio	Net revenues
1925	$ 20,709,272	$11,993,468	57.91%	$ 8,715,805
1926	21,169,076	12,404,560	58.60	8,764,516
1927	21,972,497	12,954,313	58.96	9,018,184
1928	24,894,745	13,949,468	56.03	10,945,277
1929	22,523,436	14,079,678	62.51	8,443,758
1930	18,681,284	12,551,779	67.19	6,129,505
1931	13,881,026	9,966,340	71.80	3,914,686
1932	10,501,981	8,470,999	80.66	2,030,981
Average — 8 year period	$ 19,291,664	$ 12,046,325	62.44%	$ 7,245,339
Average per mile of track operated	8,022	5,009		3,013

Source: Reports of company to State Railroad Commission and to Tax Commissioner of North Dakota.

330 Defts. Ex. M.

B. M.

Table — 15 — (L. A. Baker)

Great Northern Railway Company

Total Tons of Revenue Freight Originated in Each State for The Five Year Period, 1928–1932, Average Tonnage Originated Per Annum and Average Tonnage Originated Per Mile of Track Operated in Each State Per Annum.

State	Miles of track operated at end of period (1)	Revenue freight originated 1928–1932 (Tons)	Percent of System Total	Averages 1928 - 1932	
				Average tons originated per annum in each state	Ave. No. of tons originated per mile of track oper'd—per annum
Wisconsin	234.09	840,128	0.67%	168,026	718
Minnesota	3,155.62	67,615,392	54.13	13,523,078	4,285
Iowa	115.26				
North Dakota	2,404.83	10,265,341	8.22	2,053,068	854
South Dakota	404.88	1,084,896	0.87	216,979	536
Montana	2,646.32	10,330,182	8.27	2,066,036	781
Idaho	135.85	605,124	0.48	121,025	891
Washington	1,925.50	16,478,220	13.19	3,295,644	1,712
Oregon	285.70	1,164,459	0.93	232,892	815
California	118.51				
Manitoba	196.92				
British Columbia	422.08				
System	12,049.56	124,922,190	100%	24,984,438	2,073

(1) Average mileage operated in each state during the five year period was not available, however, there was but little change in track mileage during the five year period with the exception of the extension into California.

Source: Derived from records of the Great Northern Railway Company or reports of the Great Northern Railway Company to Railroad Commissions or Public Utility Commissions of the several states.

Table - 17 - (L. A. Baker)

GREAT NORTHERN RAILWAY COMPANY

VARIOUS RATIOS REFLECTING RELATIVE BUSINESS PERFORMED IN NORTH DAKOTA AND RELATIVE UNITS OF PROPERTY LOCATED IN NORTH DAKOTA

(Ratios applicable Assessment years 1929 - 1933)

ount	Entire System	North Dakota	Percentage in North Dakota
E - Revenue car and locomo- ar average preceding assess-			
1929	652,804,301	127,752,405	19.57%
1930	668,963,843	131,204,568	19.61
1931	664,887,162	131,091,594	19.72
1932	627,799,764	124,906,156	19.90
1933	571,982,004	114,602,429	20.04
iles plus passenger miles - ceding assessment years -			
1929	9,328,362,174	1,724,454,417	18.49
1930	9,728,997,990	1,783,790,014	18.33
1931	9,739,629,049	1,793,848,432	18.42
1932	9,150,507,022	1,706,668,009	18.65
1933	8,176,514,395	1,547,740,217	18.93
NUES - 5 year average preced- re -1929	$ 117,438,614	$ 21,629,070	18.42
1930	120,576,554	22,253,805	18.46
1931	118,590,778	21,848,207	18.42
1932	110,531,487	20,390,598	18.45
1933	98,060,535	18,096,494	18.45
END OF YEAR - preceding			
1929	11,895.26	2,375.44	19.97
1930	11,868.58	2,396.54	20.19
1931	11,935.54	2,408.15	20.18
1932	11,924.24	2,407.84	20.19
1933	12,049.56	2,404.83	19.96
ERATED AND TRACKAGE LEASED nd of year preceding assess-			
1929	10,854.62	2,375.44	21.88
1930	10,827.07	2,396.54	22.13
1931	10,883.49	2,408.15	22.13
1932	10,895.18	2,407.84	22.10
1933	11,018.13	2,404.83	21.83
ES - 5 year average preceding			
1929	$ 39,855,512.45	$ 8,945,945	22.45
1930	41,463,282.86	9,177,508	22.13
1931	40,129,788.10	8,660,248	21.58
1932	36,070,399.42	7,690,282	21.32
1933	30,139,429.12	6,292,841	20.88

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B.M.

Table - 17 - (L. A. Baker)

GREAT NORTHERN RAILWAY COMPANY

COMPARISON OF VARIOUS RATIOS REFLECTING RELATIVE BUSINESS PERFORMED IN NORT
RELATIVE UNITS OF PROPERTY LOCATED IN NORTH DAKOTA

(Ratios applicable assessment years 1929 - 1933)

Factors of apportionment	Entire System	North D
TRANSPORTATION SERVICE - Revenue car and locomotive mileage - 5 year average preceding assessment years - 1929	652,804,301	127,75
1930	668,963,843	131,20
1931	664,887,162	131,09
1932	627,799,764	124,90
1933	571,982,004	114,60
TRAFFIC UNITS - Ton miles plus passenger miles - 5 year average preceding assessment years - 1929	9,328,362,174	1,724,45
1930	9,728,997,990	1,783,79
1931	9,739,629,049	1,793,84
1932	9,150,507,022	1,706,66
1933	8,176,514,395	1,547,74
TOTAL OPERATING REVENUES - 5 year average preceding assessment years -1929	$ 117,438,614	$ 21,62
1930	120,576,554	22,25
1931	118,590,778	21,84
1932	110,531,487	20,39
1933	98,060,535	18,09
TRACKAGE OPERATED AT END OF YEAR - preceding assessment years - 1929	11,895.26	
1930	11,868.58	
1931	11,935.54	
1932	11,924.24	
1933	12,049.56	
TRACKAGE OWNED AND OPERATED AND TRACKAGE LEASED AND OPERATED - at end of year preceding assessment years - 1929	10,854.62	
1930	10,827.07	
1931	10,883.49	
1932	10,895.18	
1933	11,018.13	
NET OPERATING REVENUES - 5 year average preceding assessment years - 1929	$ 39,855,512.45	$ 8,94
1930	41,463,282.86	9,17
1931	40,129,788.10	8,66
1932	36,070,399.42	7,69
1933	30,139,429.12	6,29
[illegible] COST OF REPRODUCTION -		

1932	110,531,487	20,390,598	18.45
1933	98,060,535	18,096,494	18.45
END OF YEAR - preceding			
1929	11,895.26	2,375.44	19.97
1930	11,868.58	2,396.54	20.19
1931	11,935.54	2,408.15	20.18
1932	11,924.24	2,407.84	20.19
1933	12,049.56	2,404.83	19.96
ERATED AND TRACKAGE LEASED nd of year preceding assess-			
1929	10,854.62	2,375.44	21.88
1930	10,827.07	2,396.54	22.13
1931	10,883.49	2,408.15	22.13
1932	10,895.18	2,407.84	22.10
1933	11,018.13	2,404.83	21.83
ES - 5 year average preceding			
1929	$ 39,855,512.45	$ 8,945,945	22.45
1930	41,463,282.86	9,177,508	22.13
1931	40,129,788.10	8,660,248	21.58
1932	36,070,399.42	7,690,282	21.32
1933	30,139,429.12	6,292,841	20.88
I.C.C. COST OF REPRODUCTION - plus additions and betterments preceding assessment years -			
1929	542,563,288	74,865,189	13.80
1930	545,205,416	75,911,661	13.92
1931	555,209,015	77,385,164	13.94
1932	564,022,017	78,057,683	13.84
1933(I.C.C.value, new)	628,106,411	89,964,680	14.32

AVERAGES DERIVED FROM ABOVE TABULATION

apportionment	Percentage of North Dakota business or property applicable to assessment years - 1929	1930	1931	1932	1933
VERAGES					
ge of transportation service, perating revenues - (Average	18.826%	18.80%	18.853%	19.00%	19.14%
perated & three "use factors" ctors)	19.113	19.148	19.185	19.298	19.345
erated & leased and operated s" (Average of four factors)	19.59	19.632	19.673	19.775	19.812
ysical property & "use- fact- ve factors)	18.05	18.102	18.136	18.206	18.34
ysical property, transporta- ie units, gross revenues & ge of six factors)	18.783	18.773	18.710	18.725	18.763

Defendants' Exhibit 473

	1932	110,531,487	20,3
	1933	98,060,535	18,0
TRACKAGE OPERATED AT END OF YEAR - preceding assessment years -	1929	11,895.26	
	1930	11,868.58	
	1931	11,935.54	
	1932	11,924.24	
	1933	12,049.56	
TRACKAGE OWNED AND OPERATED AND TRACKAGE LEASED AND OPERATED - at end of year preceding assessment years -	1929	10,854.62	
	1930	10,827.07	
	1931	10,883.49	
	1932	10,895.18	
	1933	11,018.13	
NET OPERATING REVENUES - 5 year average preceding assessment years -	1929	$ 39,855,512.45	$ 8,9
	1930	41,463,282.86	9,1
	1931	40,129,788.10	8,6
	1932	36,070,399.42	7,6
	1933	30,139,429.12	6,2
PHYSICAL PROPERTY - I.C.C. COST OF REPRODUCTION - Less depreciation plus additions and betterments as of end of year preceding assessment years -	1929	542,563,288	74,8
	1930	545,205,416	85,9
	1931	555,209,015	77,3
	1932	564,022,017	78,0
	1933(I.C.C. value, new)	628,106,411	89,9

AVERAGES DERIVED FROM ABOVE TABULATION

Composite factors of apportionment	Percentage of North Dakota applicable to a		
	1929	1930	1931
AVERAGES			
"USE FACTORS" - Average of transportation service, traffic units and operating revenues - (Average of three factors)	18.826%	18.80%	18.853%
Average of trackage operated & three "use factors" (Average of four factors)	19.113	19.148	19.185
Trackage owned and operated & leased and operated & three "use factors" (Average of four factors)	19.59	19.632	19.673
Trackage operated, physical property & "use factors" (Average of five factors)	18.05	18.102	18.136
Trackage operated, physical property, transportation service, traffic units, gross revenues & net revenues (Average of six factors)	18.783	18.773	18.710

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Table —18— (L. A. Baker)

Assessed Value of the Great Northern Railway Property in North Dakota for the Years 1915 to 1933 Inclusive

Assessment year	Assessment		Basis of Assessment (1)	Full value on basis of final assessment	Increase or decrease compared with previous year on full value basis—(Decrease–D, Increase–I)	
	By State Board of Equalization	As adjusted by U. S. District Court			Amount	Percent
1915	$22,422,465		25%	$89,689,860	$.....	.....
1916	20,152,048		25%	80,608,192	9,081,668-D	10.13-D
1917	28,318,277	$24,623,693	25%	98,494,772	17,886,580-I	22.19-I
1918	31,176,247	27,086,062	30%	90,286,873	8,207,899-D	8.33-D
1919	86,603,330		100%	86,603,330	3,683,543-D	4.08-D
1920	86,599,348		100%	86,599,348	3,982-D	.....
1921	82,267,096		100%	82,267,096	4,332,252-D	5.00-D
1922	82,267,047		100%	82,267,047	49-D	.....
1923	82,267,047		100%	82,267,047	.....	.....
1924	82,266,895		100%	82,266,895	152-D	.....
1925	82,266,353		100%	82,266,353	542-D	.....
1926	82,266,220		100%	82,266,220	133-D	.....
1927	82,266,387		100%	82,266,387	167-I	.....
1928	82,266,386		100%	82,266,386	1-D	.....
1929	83,294,677		100%	83,294,677	1,028,291-I	1.25-I
1930	83,294,688		100%	83,294,688	11-I	.....
1931	82,999,997		100%	82,999,997	294,691-D	0.35-D
1932	78,850,024		100%	78,850,024	4,149,973-D	5.00-D
1933	78,832,888		100%	78,832,888	17,136-D	0.02-D

Comparison of 1917 and 1919 assessments with that of 1933 on basis of full value

1917 assessment	$98,494,772 (2)	1919 assessment	$86,603,330
1933 assessment	78,832,888	1933 assessment	78,832,888
Amount of reduction	$19,661,884	Amount of reduction	$ 7,770,442
Percent reduction	19.96%	Percent reduction	8.97%

(1) Basis of assessment for the years 1915 to 1916 was estimated to be 25% of full value:
Basis of assessment for the year 1917 was found by the United States District Court for North Dakota in the 1917 railroad tax cases to be 25% of full value.
Basis of assessment for 1918 for railroad property under the classification law of 1917 was 30% of full value.
Basis of assessment of railroad property from 1919 to 1933 was 100% of full value.

(2) Full value basis.

Table - 19 - (L. A. Baker)

GREAT NORTHERN RAILWAY COMPANY

ALLOCATION OF VALUE TO NORTH DAKOTA - STOCK AND BOND AND 6% CAPITALIZATION METHODS - FI

Allocation to State made by five methods each of which employs differ

Report year	System value of operating property as reflected by - Stock and bond value - 5 year average less estimated value of nonoperating property	Net railway operating income - 5 year average capitalized at 6%	Average of stock and bond value and capitalized value	Percentage of System value in North Dakota as reflected by indicated factors	Values apportioned to North Da - According to stock and bond values	According to capitalized value	Accor to av of st and b capita val
1. Apportionment to North Dakota on basis of transportation service, traffic unit							
1929	$ 394,731,592	$480,848,367	$437,789,980	18.826%	$74,312,170	$90,524,514	$82,41
1930	413,609,106	508,369,150	460,989,128	18.80	77,758,512	95,573,400	86,66
1931	424,398,447	487,156,900	455,777,674	18.353	80,011,839	91,843,690	85,92
1932	405,437,721	425,120,200	415,278,961	19.00	77,033,167	80,772,838	78,90
1933	358,297,406	332,080,233	345,188,820	19.14	68,578,124	63,560,157	66,06
2. Apportionment to North Dakota on basis of mileage of tracks operated							
1929	394,731,592	480,848,367	437,789,980	19.113	75,445,049	91,904,548	83,67
1930	413,609,106	508,369,150	460,989,128	19.148	79,197,872	97,342,525	88,27
1931	424,398,447	487,156,900	455,777,674	19.185	81,420,842	93,461,051	87,44
1932	405,437,721	425,120,200	415,278,961	19.298	78,241,371	82,039,696	80,14
1933	358,297,406	332,080,233	345,188,820	19.345	69,312,633	64,240,921	66,7
3. Apportionment to North Dakota on basis of mileage of all tracks owned and operated and le							
1929	394,731,592	480,848,367	437,789,980	19.59	77,327,919	94,198 95	85,76
1930	413,609,106	508,369,150	460,989,128	19.632	81,199,740	99 803,232	90,5
1931	424,398,447	487,156,900	455,777,674	19.677	83,491,906	95,838,377	89,6
1932	405,437,721	425,120,200	415,278,961	19.775	80,175,309	84,067,520	82,1
1933	358,297,406	332,080,233	345,188,820	19.812	70,985,382	65,791,736	68,3
4. Apportionment to North Dakota on basis of trackage operated, physical prop							
1929	394,731,592	480,848,367	437,789,980	18.05	71,249,052	86,793,130	79,0
1930	413,609,106	508,369,150	460,989,128	18.102	74,871,520	92,024,984	83,4
1931	424,398,447	487,156,900	455,777,674	18.136	76,968,902	88,350,775	82,6
1932	405,437,721	425,120,200	415,278,961	18.206	73,813,991	77,397,384	75,60
[illegible]	[illegible]	332,080,233	345,188,820	18.34	65,711,744	60,903,515	63,3

	Average [illegible] estimated value of nonoperating property	5 year average capitalized at 6%	bond value and capitalized value	reflected by indicated factors	to stock and bond values	to capitalized value	of stock and bond capitalized value
1. Apportionment to North Dakota on basis of transportation service, traffic units							
1929	$ 394,731,592	$480,848,367	$437,789,980	18.826%	$74,312,170	$90,524,514	$82,418,
1930	413,609,106	508,369,150	460,989,128	18.80	77,758,512	95,573,400	86,665,
1931	424,398,447	487,156,900	455,777,674	18.353	80,011,839	91,843,690	85,927,
1932	405,437,721	425,120,200	415,278,961	19.00	77,033,167	80,772,838	78,903,
1933	358,297,406	332,080,233	345,188,820	19.14	68,578,124	63,560,157	66,069,
2. Apportionment to North Dakota on basis of mileage of tracks operated an							
1929	394,731,592	480,848,367	437,789,980	19.113	75,445,049	91,904,548	83,674,
1930	413,609,106	508,369,150	460,989,128	19.148	79,197,872	97,342,525	88,270,
1931	424,398,447	487,156,900	455,777,674	19.185	81,420,842	93,461,051	87,440,
1932	405,437,721	425,120,200	415,278,961	19.298	78,241,371	82,039,696	80,140,
1933	358,297,406	332,080,233	345,188,820	19.345	69,312,633	64,240,921	66,776,
3. Apportionment to North Dakota on basis of mileage of all tracks owned and operated and lease							
1929	394,731,592	480,848,367	437,789,980	19.59	77,327,919	94,198 95	85,763,
1930	413,609,106	508,369,150	460,989,128	19.632	81,199,740	99 803,232	90,501,
1931	424,398,447	487,156,900	455,777,674	19.677	83,491,906	95,838,377	89,665,
1932	405,437,721	425,120,200	415,278,961	19.775	80,175,309	84,067,520	82,121,
1933	358,297,406	332,080,233	345,188,820	19.812	70,985,882	65,791,736	68,388,
4. Apportionment to North Dakota on basis of trackage operated, physical proper							
1929	394,731,592	480,848,367	437,789,980	18.05	71,249,052	86,793,130	79,021,
1930	413,609,106	508,369,150	460,989,128	18.102	74,871,520	92,024,984	83,448,
1931	424,398,447	487,156,900	455,777,674	18.136	76,968,902	88,350,775	82,659,
1932	405,437,721	425,120,200	415,278,961	18.206	73,817,201	77,397,384	75,605,
1933	358,297,406	332,080,233	345,188,820	18.34	65,711,744	60,903,515	63,307,
5. Apportionment to North Dakota on basis of trackage operated physical property transportation serv							
1929	394,731,592	480,848,367	437,789,980	18.783	74,142,435	90,317,749	82,230,
1930	413,609,106	508,369,150	460,989,128	18.773	77,646,837	95,436,141	86,541,
1931	424,398,447	487,156,900	455,777,674	18.770	79,404,349	91,147,056	85,276,
1932	405,437,721	425,120,200	415,278,961	18.725	75,918,213	79,603,757	77,760,
1933	358,297,406	332,080,233	345,188,820	18.761	67,227,362	62,320,234	64,767,

Table - 19 - (L. A. Baker)

GREAT NORTHERN RAILWAY COMPANY

AND BOND AND 6% CAPITALIZATION METHODS - FIVE YEAR PERIOD - ASSESSMENT YEARS 1929 - 1933

five methods each of which employs different combinations of apportionment factors

Percentage of System value in North Dakota as reflected by indicated factors	Values apportioned to North Dakota: According to stock and bond values	According to capitalized value	According to average of stock and bond & capitalized value	Assessment	Ratio of assessment to assigned values: Stock and bond values	Capitalized value	Composite value
Mile of transportation service, traffic units and gross operating revenues averaged							
18.826%	$74,312,170	$90,524,514	$82,418,342	$ 83,294,677	112.09%	92.01%	101.06%
18.80	77,758,512	95,573,400	86,665,956	83,294,688	107.12	87.15	96.11
18.353	80,011,839	91,843,690	85,927,765	82,999,997	103.73	90.37	96.59
19.00	77,033,167	80,772,838	78,903,003	78,850,024	102.36	97.62	99.93
19.14	68,578,124	63,560,157	66,069,140	78,832,888	114.95	124.03	119.32
Mile on basis of mileage of tracks operated and three "use factors" averaged							
19.113	75,445,049	91,904,548	83,674,799	83,294,677	110.40	90.63	99.55
19.148	79,197,872	97,342,525	88,270,198	83,294,688	105.17	85.57	94.36
19.185	81,420,842	93,461,051	87,440,947	82,999,997	101.94	88.81	94.92
19.298	78,241,371	82,039,696	80,140,534	78,850,024	100.78	96.11	98.39
19.345	69,312,633	64,240,921	66,776,777	78,832,888	113.73	122.71	118.05
Mile of all tracks owned and operated and leased and operated and three "use factors" averaged							
19.59	77,327,919	94,19[illegible] 95	85,763,057	83,294,677	107.72	88.42	97.12
19.632	81,199,740	99 803,932	90,501,386	83,294,688	102.58	83.46	92.04
19.677	83,491,906	95,838,377	89,665,142	82,999,997	99.41	86.60	92.57
19.775	80,175,309	84,067,520	82,121,415	78,850,024	98.35	93.79	96.02
19.812	70,985,882	65,791,736	68,388,809	78,832,888	111.05	119.82	115.27
Mile on basis of trackage operated, physical property and three "use factors" averaged							
18.05	71,249,052	86,793,130	79,021,091	83,294,677	116.91	95.97	105.41
18.102	74,871,520	92,024,984	83,448,252	83,294,688	111.25	90.51	99.82
18.136	76,968,902	88,350,775	82,659,839	82,999,997	107.84	93.94	100.41
18.206	73,813,291	77,397,384	75,605,688	78,850,024	106.82	101.88	104.29
[illegible]	[illegible]	80,901,515	83,307,629	78,832,888	119.97	129.44	124.52

Reflected by indicated factors	to stock and bond values	to capitalized value	of stock and bond & capitalized value		Stock and bond values	Capitalized value	Composite value
Basis of transportation service, traffic units and gross operating revenues averaged							
18.826%	$74,312,170	$90,524,514	$82,418,342	$ 83,294,677	112.09%	92.01%	101.06%
18.80	77,758,512	95,573,400	86,665,956	83,294,688	107.12	87.15	96.11
18.353	80,011,839	91,843,690	85,927,765	82,999,997	103.73	90.37	96.59
19.00	77,033,167	80,772,838	78,903,003	78,850,024	102.36	97.62	99.93
19.14	68,578,124	63,560,157	66,069,140	78,832,888	114.95	124.03	119.72
Basis on basis of mileage of tracks operated and three "use factors" averaged							
19.113	75,445,049	91,904,548	83,674,799	83,294,677	110.40	90.63	99.55
19.148	79,197,872	97,342,525	88,270,198	83,294,688	105.17	85.57	94.36
19.185	81,420,842	93,461,051	87,440,947	82,999,997	101.94	88.81	94.92
19.298	78,241,371	82,039,696	80,140,534	78,850,024	100.78	96.11	98.39
19.345	69,312,633	64,240,921	66,776,777	78,832,888	113.73	122.71	118.05
Basis of all tracks owned and operated and leased and operated and three "use factors" averaged							
19.59	77,327,919	94,198 95	85,763,057	83,294,677	107.72	88.42	97.12
19.632	81,199,740	99 803,732	90,501,386	83,294,688	102.58	83.46	92.04
19.677	83,491,906	95,838,377	89,665,142	82,999,997	99.41	86.60	92.57
19.775	80,175,309	84,067,520	82,121,415	78,850,024	98.35	93.79	96.08
19.812	70,985,882	65,791,736	68,388,809	78,832,888	111.05	119.82	115.27
Basis of trackage operated, physical property and three "use factors" averaged							
18.05	71,249,052	86,793,130	79,021,091	83,294,677	116.91	95.97	105.41
18.102	74,871,520	92,024,984	83,448,252	83,294,688	111.25	90.51	99.82
18.136	76,968,902	88,350,775	82,659,839	82,999,997	107.84	93.94	100.41
18.206	73,817,201	77,397,384	75,605,588	78,850,024	106.82	101.88	104.29
18.34	65,711,744	60,903,515	63,307,629	78,832,888	119.97	129.44	124.52
Operated, physical property transportation service, traffic units, gross revenues & net revenues averaged							
18.783	74,142,435	90,317,749	82,230,092	83,294,677	112.34	92.22	101.20
18.773	77,646,837	95,436,141	86,541,489	83,294,688	107.27	87.28	96.25
18.770	79,404,949	91,147,056	85,276,003	82,999,997	104.53	91.06	97.73
18.725	75,918,213	79,603,757	77,760,985	78,850,024	103.86	99.05	101.36
18.763	67,227,142	62,304,214	64,765,678	78,832,888	117.26	126.52	121.73

Table - 20 - (J. A. Baker)

GREAT NORTHERN RAILWAY COMPANY

ALLOCATION OF VALUE TO NORTH DAKOTA - STOCK AND BOND AND 5% CAPITALIZATION METHODS - FI

Allocation to State is made by five methods each of which employs different

Assessment year	System value of operating property as reflected by: Stock and bond value - 5 year average less estimated value of nonoperating property	Net railway operating income - 5 year average capitalized at 5%	Average of stock and bond value and capitalized value	Percentage of system value in North Dakota as reflected by indicated factors	Values apportioned to North Da: According to stock and bond values	According to 5% capitalized value	Acco aver stoc bond capi valu
1. Apportionment to North Dakota on basis of transportation service, traffic units							
[illegible]	$ 394,731,592	$577,018,040	$485,874,816	18.826%	$74,312,170	$108,629,416	$91,4
1930	413,609,106	610,042,980	511,826,043	18.80	77,758,512	114,688,080	96,2
1931	424,398,447	584,588,280	504,493,364	18.853	80,011,839	110,212,428	95,1
1932	405,437,721	510,144,240	457,790,980	19.00	77,033,167	96,927,406	86,9
1933	358,297,406	398,496,280	378,396,843	19.14	68,578,124	76,272,888	72,4
2. Apportionment to North Dakota on basis of mileage of tracks operated and t							
1929	394,731,592	577,018,040	485,874,816	19.113	75,445,049	110,285,458	92,8
1930	413,609,106	610,042,980	511,826,043	19.148	79,197,872	116,811,030	98,0
1931	424,398,447	584,588,280	504,493,364	19.185	81,420,842	112,153,262	96,7
1932	405,437,721	510,144,240	457,790,980	19.298	78,241,371	98,447,635	88,3
1933	358,297,406	398,496,280	378,396,843	19.345	69,312,533	77,089,105	73,2
3. Apportionment to North Dakota on basis of mileage of all tracks owned and operated and lea							
1929	394,731,592	577,018,040	485,874,816	19.59	77,327,919	113,037,834	95,1
1930	413,609,106	610,042,980	511,826,043	19.632	81,199,740	119,763,638	100,4
1931	424,398,447	584,588,280	504,493,364	19.673	83,491,906	115,006,052	99,2
1932	405,437,721	510,144,240	457,790,980	19.775	80,175,309	100,881,023	90,5
1933	358,297,406	398,496,280	378,396,843	19.812	70,985,882	78,950,083	74,9
4. Apportionment to North Dakota on basis of trackage operated, physical propert							
1929	394,731,592	577,018,040	485,874,816	18.05	71,249,052	104,151,756	87,7
1930	413,609,106	610,042,980	511,826,043	18.102	74,871,520	110,429,980	92,6
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Assess-ment year	System value of operating property as reflected by — Stock and bond value - 5 year average less estimated value of nonoperating property	Net railway operating income - 5 year average capitalized at 5%	Average of stock and bond value and capitalized value	of system value in North Dakota as reflected by indicated factors	Values apportioned to North D… — According to stock and bond values	According to % capitalized value	Acco… aver… stoc… bon… cap… valu…
1. Apportionment to North Dakota on basis of transportation service, traffic units							
1929	$ 394,731,592	$577,018,040	$485,874,816	18.826%	$74,312,170	$108,629,416	$91,4…
1930	413,609,106	610,042,980	511,826,043	18.80	77,758,512	114,688,080	96,2…
1931	424,398,447	584,588,280	504,493,364	18.853	80,011,839	110,212,428	95,1…
1932	405,437,721	510,144,240	457,790,980	19.00	77,033,167	96,927,406	86,9…
1933	358,297,406	398,496,280	378,396,843	19.14	68,578,124	76,272,888	72,4…
2. Apportionment to North Dakota on basis of mileage of tracks operated and …							
1929	394,731,592	577,018,040	485,874,816	19.113	75,445,049	110,285,458	92,8…
1930	413,609,106	610,042,980	511,826,043	19.148	79,197,873	116,811,070	98,0…
1931	424,398,447	584,588,280	504,493,364	19.185	81,420,842	112,153,262	96,7…
1932	405,437,721	510,144,240	457,790,980	19.298	78,241,371	98,447,635	88,3…
1933	358,297,406	398,496,280	378,396,843	19.345	69,312,633	77,089,105	73,2…
3. Apportionment to North Dakota on basis of mileage of all tracks owned and operated and l…							
1929	394,731,592	577,018,040	485,874,816	19.59	77,327,919	113,037,834	95,1…
1930	413,609,106	610,042,980	511,826,043	19.632	81,199,740	119,763,638	100,5…
1931	424,398,447	584,588,280	504,493,364	19.673	83,491,906	115,006,052	99,2…
1932	405,437,721	510,144,240	457,790,980	19.775	80,175,309	100,881,023	90,5…
1933	358,297,406	398,496,280	378,396,843	19.812	70,985,882	78,950,083	74,9…
4. Apportionment to North Dakota on basis of trackage operated, physical prope…							
1929	394,731,592	577,018,040	485,874,816	18.05	71,249,052	104,151,756	87,7…
1930	413,609,106	610,042,980	511,826,043	18.102	74,871,520	110,429,980	92,6…
1931	424,398,447	584,588,280	504,493,364	18.136	76,968,302	106,020,939	91,5…
1932	405,437,721	510,144,240	457,790,980	18.306	73,813,991	92,876,860	83,8…
1933	358,297,406	398,496,280	378,396,843	18.34	65,711,744	73,084,218	69,4…
5. Apportionment to North Dakota on basis of trackage operated physical property, transportation se…							
1929	394,731,592	577,018,040	485,874,816	18.783	74,142,435	108,391,298	91,2…
1930	413,609,106	610,042,980	511,826,043	18.773	77,645,837	114,523,369	96,1…
1931	424,398,447	584,588,280	504,493,364	18.710	79,404,949	109,376,467	94,4…
1932	405,437,721	510,144,240	457,790,980	18.725	75,918,213	95,524,509	85,7…
1933	358,297,406	398,496,280	378,396,843	18.763	67,227,342	74,769,857	70,9…

Defendants' Exhibit Q.

Table - 20 - (L. A. Baker)

GREAT NORTHERN RAILWAY COMPANY

E AND BOND AND 5% CAPITALIZATION METHODS - FIVE YEAR PERIOD - ASSESSMENT YEARS 1929-1933

five methods each of which employs different combinations of apportionment factors

Percentage of system value in North Dakota as reflected by indicated factors	Values apportioned to North Dakota: According to stock and bond values	According to capitalized value	According to average of stock and bond and capitalized value	Assessment	Ratio of assessment to assigned values - Stock and bond value	Capitalized value	Composite value
Basis of transportation service, traffic units and gross operating revenues averaged							
18.826%	$74,312,170	$108,629,416	$91,470,793	$83,294,677	112.09%	76.68%	91.06%
18.80	77,758,512	114,688,080	96,223,296	83,294,688	107.12	72.63	86.56
18.853	80,011,839	110,212,428	95,112,134	82,999,997	103.73	75.31	87.27
19.00	77,033,167	96,927,406	86,980,286	78,850,024	102.36	81.35	90.65
19.14	68,578,104	76,272,888	72,425,156	78,832,888	114.95	103.36	108.85
On basis of mileage of tracks operated and three "use factors" averaged							
19.113	75,445,049	110,285,458	92,865,254	83,294,677	110.40	75.53	89.69
19.148	79,197,872	116,811,030	98,004,451	83,294,688	105.17	71.31	84.99
19.185	81,420,842	112,153,262	96,787,052	82,999,997	101.94	74.01	85.76
19.298	78,241,371	98,447,635	88,34 ,503	78,850,024	100.78	80.09	89.25
19.345	69,312,633	77,089,105	73,200,869	78,832,888	113.74	102.26	107.69
Mileage of all tracks owned and operated and leased and operated and three "use factors" averaged							
19.59	77,327,919	113,037,834	95,182,876	83,294,677	107.72	73.69	87.51
19.632	81,199,740	119,763,638	100,481,689	83,294,688	102.58	69.55	82.90
19.673	83,491,906	115,006,052	99,248,979	82,999,997	99.41	72.17	83.63
19.775	80,175,309	100,881,023	90,528,166	78,850,024	98.35	78.16	87.10
19.812	70,985,882	78,950,083	74,967,983	78,832,888	111.05	99.85	105.16
Basis of trackage operated, physical property and three "use factors" averaged.							
18.05	71,249,052	104,151,756	87,700,404	83,294,677	116.91	79.97	94.98
18.102	74,871,520	110,429,980	92,650,750	83,294,688	111.25	75.43	89.90
18.136	76,868,902	106,020,930	91,444,916	82,999,997	107.94	78.29	90.72

Per cent value in North Dakota as reflected by indicated factors	Values apportioned to North Dakota: According to stock and bond values	According to capitalized value	According to average of stock and bond and capitalized value	Assessment	Ratio of assessment to assigned values — Stock and bond value	Capitalized value	Composite value
Use of transportation service, traffic units and gross operating revenues averaged							
18.826%	$74,312,170	$108,629,416	$91,470,793	$83,294,677	112.09%	76.68%	91.06%
18.80	77,758,512	114,688,080	96,223,296	83,294,688	107.12	72.63	86.56
18.853	80,011,833	110,212,428	95,112,134	82,999,997	103.73	75.31	87.27
19.00	77,033,167	96,927,406	86,980,286	78,850,024	102.36	81.35	90.65
19.14	68,578,124	76,272,888	72,425,156	78,832,888	114.95	103.36	108.85
On basis of mileage of tracks operated and three "use factors" averaged							
19.113	75,445,049	110,285,458	92,865,254	83,294,677	110.40	75.53	89.69
19.148	79,197,872	116,811,030	98,004,451	83,294,688	105.17	71.31	84.99
19.185	81,420,842	112,153,262	96,787,052	82,999,997	101.94	74.01	85.76
19.298	78,241,371	98,447,635	88,34 ,503	78,850,024	100.78	80.09	89.25
19.345	69,312,633	77,089,105	73,200,869	78,832,888	113.74	102.26	107.69
Area of all tracks owned and operated and leased and operated and three "use factors" averaged							
19.59	77,327,919	113,037,834	95,182,876	83,294,677	107.72	73.69	87.51
19.632	81,199,740	119,763,638	100,481,689	83,294,688	102.58	69.55	82.90
19.673	83,491,906	115,006,052	99,248,979	82,999,997	99.41	72.17	83.63
19.775	80,175,309	100,881,023	90,528,166	78,850,024	98.35	78.16	87.10
19.812	70,985,882	78,950,083	74,967,983	78,832,888	111.05	99.85	105.16
Basis of trackage operated, physical property and three "use factors" averaged.							
18.05	71,249,052	104,151,756	87,700,404	83,294,677	116.91	79.97	94.98
18.102	74,871,520	110,429,980	92,650,750	83,294,688	111.25	75.43	89.90
18.136	76,968,902	106,020,930	91,494,916	82,999,997	107.84	78.29	90.72
18.306	73,813,991	92,876,860	83,345,426	78,850,024	106.82	84.90	94.61
18.34	65,711,744	73,084,218	69,397,981	78,832,888	119.97	107.86	113.60
Operated physical property, transportation service, traffic units, gross revenues & net revenues averaged							
18.783	74,142,435	108,391,298	91,261,867	83,294,677	112.34	76.85	91.27
18.773	77,645,837	114,523,369	96,035,103	83,294,688	107.27	72.73	86.69
18.710	79,404,949	109,376,467	94,390,708	82,999,997	104.53	75.88	87.93
18.725	75,918,213	95,524,509	85,721,361	78,850,024	103.86	82.54	91.98
18.763	67,227,342	74,769,857	70,998,599	78,832,888	117.26	105.43	111.03

Table - 23 - (L. A. Baker)

GREAT NORTHERN RAILWAY COMPANY - Tax Year 1931

(C. F. Raich method)

PERATING PROPERTY IN NORTH DAKOTA IN 1931 AS REFLECTED BY MARKET VALUE
KS AND BONDS AND BY NET RAILWAY OPERATING INCOME CAPITALIZED AT 6% -
BOTH FOR THE FIVE YEAR PERIOD PRECEDING THE ASSESSMENT YEAR

onds - 5 year average market value	$595,646,943
ed value of nonoperating property	171,248,496
nd value of operating property	424,398,447
value - average net railway operating income for the eriod 1926-1930 ($29,229,414) capitalized at 6%	487,156,900
ystem value - average of (a) and (b)	455,777,674

R MILE OF TRACK OF ENTIRE SYSTEM -
divided by 11,935.54 miles - $ 38,187

five year period preceding the 1931 assessment a Mile of Track in North Dakota
ried less traffic and required less use of rolling stock than the average mile
entire system. Under these circumstances a mile of track is not a proper unit
se in apportioning to North Dakota its equitable proportion of system value ex-
such allowance or correction as is indicated by the relative worth of a mile of
Dakota compared with the average mile of track of the entire system.

ue worth of a mile of track in North Dakota to an average mile of track of the
s indicated in the schedules below -

STATISTICS OF OPERATION - SYSTEM AND STATE OF NORTH DAKOTA COMPARED

Averages per mile of track - 5 years ended December 31, 1930			
Operating revenues	Traffic units (Ton miles plus passenger miles)	Use of rolling stock (Car and locomotive mileage)	Miles of track operated Dec. 31, 1930
$ 9,936	816,019	55,707	11,935.54
9,073	744,907	54,437	2,406.15
91.31%	91.29%	97.72%	(20.18%)

ION:

draft 4 B.M.

Table - 23 - (L. A. Baker)

GREAT NORTHERN RAILWAY COMPANY - Tax Year 1931

(C. F. Balch method)

VALUE OF OPERATING PROPERTY IN NORTH DAKOTA IN 1931 AS REFLECTED BY M
OF STOCKS AND BONDS AND BY NET RAILWAY OPERATING INCOME CAPITALIZE
BOTH FOR THE FIVE YEAR PERIOD PRECEDING THE ASSESSMENT YE

(a) Stocks and bonds - 5 year average market value - - -

...apportioning to North Dakota its equitable proportion of system value ex... such allowance or correction as is indicated by the relative worth of a mile of ...kota compared with the average mile of track of the entire system.

...e worth of a mile of track in North Dakota to an average mile of track of the ... indicated in the schedules below -

STATISTICS OF OPERATION - SYSTEM AND STATE OF NORTH DAKOTA COMPARED

Averages per mile of track - 5 years ended December 31, 1930			Miles of track operated Dec. 31, 1930
Operating revenues	Traffic units (Ton miles plus passenger miles)	Use of rolling stock (Car and locomotive mileage)	
$ 9,936	816,019	55,707	11,935.54
9,073	744,907	54,437	2,406.15
91.31%	91.29%	97.72%	(20.18%)

TION:

of track of entire system, collectively, are worth per mile - - -	$ 38,187
of track in North Dakota, collectively, are worth per mile -	
of average on basis of operating revenues or - - - - - - - - - -	34,869
of average on basis of traffic units or - - - - - - - - - - - -	34,861
of average on basis of use of rolling stock or - - - - - - - - -	37,316
(a), (b) and (c) -	107,046
of (a), (b) and (c) representing the value of a mile of in North Dakota -	$ 35,682

OF ROAD IN NORTH DAKOTA:

ses of assignment to state - $35,682 x 2,408.15 miles - - - - - -	$ 85,927,608
GREGATE VALUE OF ROAD IN NORTH DAKOTA, AS FOUND ABOVE, ASSESSMENT	
value of road in North Dakota in 1931 - - - - - - - - - - - - -	85,927,608
in 1931 -	82,999,997
ssessment to assigned value found above - - - - - - - - - - - -	96.59%

r termed "use of rolling stock" as used in this exhibit is developed on a somewhat basis than is used in the so-called Balch method because the information is not available. The percentage result would differ but slightly if at all, ercentage result shown above in connection with the factor "use of rolling stock".

Defendants' Exhibit R. 281

[illegible] under these circumstances a mile of track [illegible]
of fixture to use in apportioning to North Dakota its equitable proportion
cept by making such allowance or correction as is indicated by the relative
track in North Dakota compared with the average mile of track of the entire

The relative worth of a mile of track in North Dakota to an average mi
entire system is indicated in the schedules below =

STATISTICS OF OPERATION - SYSTEM AND STATE OF NORTH DAKOTA C

	Averages per mile of track - 5 years ended December 31.		
	Operating revenues	Traffic units (Ton miles plus passenger miles)	Use of rollin (Car and loc mileage)
System	$ 9,936	816,019	55,707
North Dakota	9,073	744,907	54,437
Ratio of N. D. to System	91.31%	91.29%	97.72%

EQUALIZING EQUATION:

The miles of track of entire system, collectively, are worth per mile

The miles of track in North Dakota, collectively, are worth per mile =
(a) 91.31% of average on basis of operating revenues or - - - - - - -
(b) 91.29% of average on basis of traffic units or - - - - - - - - -
(c) 97.72% of average on basis of use of rolling stock or - - - - - -

(d) Sum of (a), (b) and (c) -

(e) Average of (a), (b) and (c) representing the value of a mile of track in North Dakota -

AGGREGATE VALUE OF ROAD IN NORTH DAKOTA:

On three bases of assignment to state - $35,682 x 2,408.15 miles - - -

COMPARISON OF AGGREGATE VALUE OF ROAD IN NORTH DAKOTA, AS FOUND ABOVE, WITH THE 1931 ASSESSMENT

Aggregate value of road in North Dakota in 1931 - - - - - - - - - -

Assessment in 1931 -

Ratio of assessment to assigned value found above - - - - - - - - -

NOTE: The factor termed "use of rolling stock" as used in this exhibit is
what different basis than is used in the so-called Balch method becaus
required was not available. The percentage result would differ but sl
from the percentage result shown above in connection with the factor "

Table 24 - (L. A. Baker)

GREAT NORTHERN RAILWAY COMPANY Tax Year 1932

(C. F. Balch method)

ERATING PROPERTY IN NORTH DAKOTA IN 1932 AS REFLECTED BY MARKET VALUE OF
AND BONDS AND BY NET RAILWAY OPERATING INCOME CAPITALIZED AT 6%
TH FOR THE FIVE YEAR PERIOD PRECEDING THE ASSESSMENT YEAR

s - 5 year average market value	$ 576,315,169
value of nonoperating property	170,877,448
value of operating property	$405,437,721
me - average net railway operating income for the five 7-1931 ($25,507,212) capitalized at 6%	$ 425,120,200
n value - average (a) and (b)	$ 415,278,961

ILE OF TRACK OF ENTIRE SYSTEM -
vided by 11,924.24 miles $ 34,826

e year period preceding the 1932 assessment a Mile of Track in North Dakota
d less traffic and required less use of rolling stock than the average mile
ire system. Under these circumstances a mile of track is not a proper unit
n apportioning to North Dakota its equitable proportion of system value
ch allowance or correction as is indicated by the relative worth of a mile
akota compared with the average mile of track of the entire system.

orth of a mile of track in North Dakota to an average mile of track of the
dicated in the schedules below -

STATISTICS OF OPERATION - SYSTEM AND STATE OF NORTH DAKOTA COMPARED

Averages per mile of track - five years ended December 31, 1931			
Operating revenues	Traffic units (Ton miles plus passenger miles)	Use of rolling stock (Car and locomotive mileage)	Miles of track operated Dec. 31, 1931
$9,269	761,387	52,649	11,924.24
8,468	708,796	51,878	2,407.84
91.36%	92.36%	98.53%	(20.19%)

ack of the entire system, collectively, are worth per mile - $ 34,826

- North Dakota, collectively, are worth per mile -

office B.M.

Table 24 - (L. A. Baker)

GREAT NORTHERN RAILWAY COMPANY Tax Year 1932

(C. F. Balch method)

VALUE OF OPERATING PROPERTY IN NORTH DAKOTA IN 1932 AS REFLECTED BY MARKET STOCKS AND BONDS AND BY NET RAILWAY OPERATING INCOME CAPITALIZED AT BOTH FOR THE FIVE YEAR PERIOD PRECEDING THE ASSESSMENT YEAR

(a) Stocks and bonds - 5 year average market value - - - - - - - - - - - - - - - -
Less estimated value of nonoperating property - - - - - - - - - - - - - - - - - -

Stock and bond value of operating property -

(b) Capitalized value - average net railway operating income for the five year period 1927-1931 ($25,507,212) capitalized at 6% - - - - - - - - - - - - - - -

(c) Composite system value - average (a) and (b) - - - - - - - - - - - - - - - - -

AVERAGE VALUE PER MILE OF TRACK OF ENTIRE SYSTEM -
$415,278,961 divided by 11,924.24 miles -

During the five year period preceding the 1932 assessment a Mile of Track in ... earned less, carried less traffic and required less use of rolling stock than the ... of track of the entire system. Under these circumstances a mile of track is not ... of measure to use in apportioning to North Dakota its equitable proportion of ... except by making such allowance or correction as is indicated by the relative ... of track in North Dakota compared with the average mile of track of the entire ...

The relative worth of a mile of track in North Dakota to an average mile of ... entire system is indicated in the schedules below

STATISTICS OF OPERATION - SYSTEM AND STATE OF NORTH DAKOTA COM...

	Averages per mile of track - five years ended December 31, ...		
	Operating revenues	Traffic units (Ton miles plus passenger miles)	Use of rolling stock (Car and locomotive mileage)
System	$9,269	761,387	52,649
North Dakota	8,468	703,796	51,875
Ratio of N. D. to System	91.36%	92.36%	98.53%

EQUALIZING EQUATION:

The miles of track of the entire system, collectively, are worth per mile ... of track in North Dakota, collectively, are worth per mile ...

[redacted] as is indicated by the relative worth of a mile [redacted] average mile of track of the entire system.

worth of a mile of track in North Dakota to an average mile of track of the
ndicated in the schedules below:

STATISTICS OF OPERATION - SYSTEM AND STATE OF NORTH DAKOTA COMPARED

Averages per mile of track - five years ended December 31, 193			
Operating revenues	Traffic units (Ton miles plus Passenger miles)	Use of rolling stock (Car and locomotive mileage)	Miles of track operated Dec. 31, 1931
$9,269	761,387	52,649	11,924.24
8,468	708,796	51,875	2,407.84
91.36%	92.36%	98.53%	(20.19%)

:

track of the entire system, collectively, are worth per mile - - - $ 34,826

track in North Dakota, collectively, are worth per mile -
average on basis of operating revenues or - - - - - - - - - - - - - 31,817
average on basis of traffic units or - - - - - - - - - - - - - - - - 32,165
average on basis of use of rolling stock or - - - - - - - - - - - - 34,314

), (b) and (c) - $98,296

f (a), (b) and (c) representing the value of a mile of
North Dakota - $ 32,765

ROAD IN NORTH DAKOTA:

s of assignment to State - $33,765 x 2,407.84 miles - - - - - - - - $78,892,878

EGATE VALUE OF ROAD IN NORTH DAKOTA, AS FOUND ABOVE,
SSESSMENT

ue of road in North Dakota in 1932 - - - - - - - - - - - - - - - - - $78,892,878

1932 - 78,850,024

sement to assigned value found above - - - - - - - - - - - - - - - - 99.95%

ormed 'use of rolling stock' as used in this exhibit is developed on a somewhat
is than is used in the so-called Baloh method because the information required
able. The percentage result would differ but slightly if at all, from the per-
t shown above in connection with the factor 'use of rolling stock'.

[illegible] such allowance or correction as is indicated by the relative [illegible] North Dakota compared with the average mile of track of the entire sy

The relative worth of a mile of track in North Dakota to an average mile of entire system is indicated in the schedules below

STATISTICS OF OPERATION - SYSTEM AND STATE OF NORTH DAKOTA COM

	Averages per mile of track - five years ended December 31, 1		
	Operating revenues	Traffic units (Ton miles plus Passenger miles)	Use of rolling sto (Car and locomoti mileage)
System	$9,269	761,387	52,649
North Dakota	8,468	708,796	51,875
Ratio of N. D. to System	91.36%	92.36%	98.53%

EQUALIZING EQUATION:

The miles of track of the entire system, collectively, are worth per mile

The miles of track in North Dakota, collectively, are worth per mile
(a) 91.36% of average on basis of operating revenues or
(b) 92.36% of average on basis of traffic units or
(c) 98.53% of average on basis of use of rolling stock or

(d) Sum of (a), (b) and (c)

(e) Average of (a), (b) and (c) representing the value of a mile of track in North Dakota

AGGREGATE VALUE OF ROAD IN NORTH DAKOTA:

On three bases of assignment to State - $33,765 x 2,407.84 miles

COMPARISON OF AGGREGATE VALUE OF ROAD IN NORTH DAKOTA, AS FOUND ABOVE, WITH THE 1932 ASSESSMENT

Aggregate value of road in North Dakota in 1932

Assessment in 1932

Ratio of assessment to assigned value found above

NOTE: The factor termed "use of rolling stock" as used in this exhibit is develo different basis than is used in the so-called Baloh method because the info was not available. The percentage result would differ but slightly if at a centage result shown above in connection with the factor "use of rolling st

Table - 25 - (L. A. Baker)

GREAT NORTHERN RAILWAY COMPANY - Tax Year 1933

(C. F. Balch method)

RATING PROPERTY IN NORTH DAKOTA IN 1933 AS REFLECTED BY MARKET VALUE OF STOCKS BONDS AND BY NET RAILWAY OPERATING INCOME CAPITALIZED AT 6% - BOTH FOR THE FIVE YEAR PERIOD PRECEDING THE ASSESSMENT YEAR

bonds - 5 year average market value - - -

Table - 25 - (L. A. Baker)

GREAT NORTHERN RAILWAY COMPANY - Tax Year 1933

(C. F. Balch method)

VALUE OF OPERATING PROPERTY IN NORTH DAKOTA IN 1933 AS REFLECTED BY MARKET V
AND BONDS AND BY NET RAILWAY OPERATING INCOME CAPITALIZED AT 6% -
FOR THE FIVE YEAR PERIOD PRECEDING THE ASSESSMENT YEAR

(a) Stocks and bonds - 5 year average market value -
Less estimated value of nonoperating property -

Stock and bond value of operating property -

(b) Capitalized value - average net railway operating income for the five year period 1928-1932 ($19,924,814) capitalized at 6%

(c) Composite system value - average of (a) and (b) -

AVERAGE VALUE PER MILE OF TRACK OF ENTIRE SYSTEM -
$345,188,820 divided by 12,049.56 miles -

During the five year period preceding the 1933 assessment a Mile of Trac
earned less, carried less traffic but required slightly more use of rolling s
rage mile of track of the entire system. Under these circumstances a mile of
proper unit of measure to use in apportioning to North Dakota its equitable p
value except by making such allowance or correction as is indicated by the re
mile of track in North Dakota compared with the average mile of track of the

The relative worth of a mile of track in North Dakota to an average mile
entire system is indicated in the schedules below -

STATISTICS OF OPERATION - SYSTEM AND STATE OF NORTH DAKOTA COMPA

	Averages per mile of track - five years ended December 31, 1		
	Operating revenues	Traffic units (Ton miles plus passenger miles)	Use of rolling stock (Car and locomotive mileag
System	$8,138	678,574	47,469
North Dakota	7,525	643,597	47,655
Ratio of N. D. to System	92.47%	94.85%	100.39%

EQUALIZING EQUATION:

[illegible] of track of the entire system, collectively, are worth per mil

[redacted] to North Dakota its equitable proportion of system
making such allowance or correction as is indicated by the relative worth of a
a North Dakota compared with the average mile of track of the entire system.

ve worth of a mile of track in North Dakota to an average mile of track of the
s indicated in the schedules below -

'ATISTICS OF OPERATION - SYSTEM AND STATE OF NORTH DAKOTA COMPARED

Averages per mile of track - five years ended December 31, 1932			Miles of track operated December 31, 1932
Operating revenues	Traffic units (Ton miles plus passenger miles)	Use of rolling stock (Car and locomotive mileage)	
$8,138	678,574	47,469	12,049.56
7,525	643,597	47,655	2,404.83
92.47%	94.85%	100.39%	(19.96%)

TION:

of track of the entire system, collectively, are worth per mile - $ 28,647

of track in North Dakota, collectively, are worth per mile -
% of average on basis of operating revenues or - - - - - - - - - - 26,490
% of average on basis of traffic units or - - - - - - - - - - - - 27,172
% of average on basis of use of rolling stock or - - - - - - - - - 28,758

(a), (b) and (c) - $ 82,420

e of (a), (b) and (c) representing the value of a mile of
in North Dakota - $ 27,473

OF ROAD IN NORTH DAKOTA

asis of assignment to State - $27,473 x 2,404.83 miles - - - - - - $66,075,109

GGREGATE VALUE OF ROAD IN NORTH DAKOTA, AS FOUND ABOVE,
ASSESSMENT

Value of road in North Dakota in 1933 - - - - - - - - - - - - - - $66,075,109

in 1933 - $78,832,888

ssessment to assigned value found above - - - - - - - - - - - - - 119.31%

r termed "use of rolling stock" as used in this exhibit is developed on a
ifferent basis than is used in the so-called Balch method because the informa-
ed was not available. The percentage result would differ but slightly if at
the percentage result shown above in connection with the factor "use of rolling

Defendants' Exhibit 285

value except by making such allowance or correction as is indicated by the mile of track in North Dakota compared with the average mile of track of th

The relative worth of a mile of track in North Dakota to an average mi entire system is indicated in the schedules below -

STATISTICS OF OPERATION - SYSTEM AND STATE OF NORTH DAKOTA COM

	Averages per mile of track - five years ended December 31		
	Operating revenues	Traffic units (Ton miles plus passenger miles)	Use of rolling stock (Car and locomotive mile
System	$8,138	678,574	47,469
North Dakota	7,525	643,597	47,655
Ratio of N. D. to System	92.47%	94.85%	100.39%

EQUALIZING EQUATION:

The miles of track of the entire system, collectively, are worth per mi

The miles of track in North Dakota, collectively, are worth per mile -
(a) 92.47% of average on basis of operating revenues or - - - - - - -
(b) 94.85% of average on basis of traffic units or - - - - - - - - -
(c) 100.39% of average on basis of use of rolling stock or - - - - -

(d) Sum of (a), (b) and (c) -

(e) Average of (a), (b) and (c) representing the value of a mile of track in North Dakota -

AGGREGATE VALUE OF ROAD IN NORTH DAKOTA

On three bases of assignment to State - $27,473 x 2,404.83 miles - - -

COMPARISON OF AGGREGATE VALUE OF ROAD IN NORTH DAKOTA, AS FOUND ABOVE, WITH THE 1933 ASSESSMENT

Aggregate value of road in North Dakota in 1933 - - - - - - - - - -

Assessment in 1933 -

Ratio of assessment to assigned value found above - - - - - - - - -

NOTE: The factor termed "use of rolling stock" as used in this exhibit is d somewhat different basis than is used in the so-called Balch method bec tion required was not available. The percentage result would differ bu all, from the percentage result shown above in connection with the fact stock"

Deft's Ex. U.

B. M.

Table —29— (L. A. Baker)

Great Northern Railway Company

Comparison of Farm Income with the Assessed Valuation of Farm Real and Personal Property, 1924-1932 (1)

Year	Gross income from farm production	Cash income from farm production	Assessment of farm real and personal property	Ratio of assessment to gross income	Ratio of assessment to cash income
1924	$300,506,000	$279,900,000	$934,835,409	311%	334%
1925	274,952,000	250,646,000	919,087,223	334	367
1926	209,132,000	185,009,000	919,615,018	440	497
1927	268,535,000	245,719,000	910,856,054	339	371
1928	249,585,000	227,810,000	909,468,343	364	399
1929	211,942,000	189,748,000	904,605,843	427	477
1930	147,931,000	129,184,000	903,526,834	611	699
1931	72,716,000	59,622,000	761,175,701	1047	1277
1932	71,364,000	60,626,000	745,671,817	1045	1230
Averages-1924-1928	$260,542,000	$237,816,800	$918,772,409	353%	386%
1929-1932	$100,790,600	$ 87,836,000	$828,745,049	822%	944%

Comparison of Great Northern Assessment with Total Operating Revenues in North Dakota for the Years 1924-1932

Year	Total operating revenues	Assessment	Ratio of assessment to total revenues
1924	$19,399,759	$82,266,895	424%
1925	20,709,272	82,266,353	397
1926	21,169,076	82,266,220	389
1927	21,972,497	82,266,387	374
1928	24,894,745	82,266,386	330
1929	22,523,436	83,294,677	370
1930	18,681,284	83,294,688	446
1931	13,881,026	82,999,997	598
1932	10,501,981	78,850,024	751
Averages—1924-1928	$21,629,070	$82,266,448	380%
1929-1932	16,396,942	82,109,847	501

(1) Basis of assessment 100% of full value. For definitions—See attached sheet.

Source: Agricultural data from bulletins of the United States Department of Agriculture. Railroad data from reports of the Great Northern Railway Company. Assessment data from records of the State Board of Equalization.

339 Defts. Ex. V.

B. M.

Table — 30 — (L. A. Baker)

Comparison of Gross Income and Cash Income From Farm Production With Gross Revenues of Railroads Within North Dakota for The Years 1924 To 1933 Inclusive

Year	Gross Income from farm production	Index 1924=100%	Gross Revenues of all railroads within the state	Index 1924=100%	Ratio of railway gross revenues to farm gross income
1924	$300,506,000	100%	$46,225,667	100%	15.38%
1925	274,952,000	91	48,914,420	106	17.79
1926	209,132,000	70	47,123,240	102	22.53
1927	268,535,000	89	49,976,540	108	18.61
1928	249,585,000	83	55,640,956	120	22.29
1929	211,942,000	71	50,831,121	110	23.98
1930	147,931,000	49	42,273,888	91	28.58
1931	72,716,000	24	30,598,870	66	42.08
1932	71,364,000	24	23,694,649	51	33.20
1933			25,709,166	56	

Year	Cash Income from farm production	Index 1924=100%	Gross Revenues of all railroads within the state	Index 1924=100%	Ratio of railway gross revenues to cash income
1924	$279,900,000	100%	$46,225,667	100%	16.52%
1925	250,646,000	90	48,914,420	106	19.52
1926	185,009,000	66	47,123,240	102	25.47
1927	245,719,000	88	49,976,540	108	20.34
1928	227,810,000	81	55,640,956	120	24.42
1929	189,748,000	68	50,831,121	110	26.79
1930	129,184,000	46	42,273,888	91	32.72
1931	59,622,000	21	30,598,870	66	51.32
1932	60,626,000	22	23,694,649	51	39.08
1933			25,709,166	56	

Comparison of Railroad Assessments with Farm Property Assessments 1924–1933

Year	Assessment of farm property (1)	Index 1924=100%	Assessment of all railroad property	Index 1924=100%	Ratio of railway to farm property assessment
1924	$934,835,409	100%	$200,672,447	100%	21.46%
1925	919,087,223	98	200,671,492	100	21.83
1926	919,615,018	98	200,829,062	100	21.84
1927	910,856,054	97	196,596,523(2)	98	21.58
1928	909,468,343	97	194,085,385	97	21.34
1929	904,605,843	97	194,554,432	97	21.51
1930	903,526,834	97	193,979,415	97	21.47
1931	761,175,701	81	188,143,706	94	24.72
1932	745,671,817	80	171,720,600	86	23.03
1933	676,533,722	72	171,633,448	86	25.37

(1) Includes farm lands and farm personal property.

(2) Reflects adjustment in Soo Railway assessment by U. S. District Court.

340 Defts. Ex. W.

B. M.

Table — 31 — (L. A. Baker)

Great Northern Railway Company

Comparison of Gross Income and Cash Income From Farm Production in North Dakota With Gross Operating Revenues of The Great Northern Railway Company in North Dakota for The Years 1924 To 1932 Inclusive.

Year	Gross income from farm production in North Dakota (1)	Cash income from farm production in North Dakota (2)	Total Operating revenues of G. N. Ry. Co. in N. D.
1924	$300,506,000	$279,900,000	$19,399,759
1925	274,952,000	250,646,000	20,709,272
1926	209,132,000	185,009,000	21,169,076
1927	268,535,000	245,719,000	21,972,497
1928	249,585,000	227,810,000	24,894,745
1929	211,942,000	189,748,000	22,523,436
1930	147,931,000	129,184,000	18,681,284
1931	72,716,000	59,622,000	13,881,026
1932	71,364,000	60,626,000	10,501,981
Averages —			
5 Years — 1924–1928	$260,542,000	$237,816,800	$21,629,070
4 Years — 1929–1932	$100,790,600	$ 87,836,000	$16,396,942
Ratios			
Ratio of 1931 income to 5 year average, 1924–1928	27.91%	25.07%	64.18%
Ratio of 1932 income to 5 year average, 1924–1928	27.39%	25.60%	48.55%
Ratio of 4 year average 1929–1932 to 5 year average 1924–1928	38.68%	36.93%	75.81%

(1) Gross income relates to the value of the quantities consumed on the farm plus quantities actually sold off the farm where these were produced.

(2) Cash income relates to the value of the quantities actually sold off the farm where these were produced. Cash income from crops is credited to the year in which the commodities were produced, evaluated at prices received during the marketing season of the particular crop. Cash income from livestock is computed on a calendar year basis, evaluated at average prices for the calendar year.

Source: Agricultural data from Bulletins of the U. S. Department of Agriculture.

341 Deft's Ex. X.

B. M.

Table —32— (L. A. Baker)

Taxable Value of All Property and of Farm Lands, Farm Personalty and Total Farm Property and Ratio of Taxable Value of Farm Property to Total Taxable Value of All Property in North Dakota for Certain Specified Years

Year	Taxable value of specified classes of property				Ratio of farm property to total value
	All property	Farm lands	Farm personalty	Total Farm property	
1917	$ 379,522,711	$ 216,448,191(1)	$44,543,000	$ 260,991,191	68.77%
1918	388,647,856	229,397,669(1)	37,048,454	266,446,123	68.56
1919	1,522,637,234	1,072,167,653	59,509,886	1,131,677,539	74.32
1920	1,501,359,358	1,035,771,210	70,384,589	1,106,155,799	73.68
1921	1,377,427,843	946,067,579	45,599,851	991,667,430	71.99
1922	1,308,315,404	899,305,661	46,465,113	945,770,774	72.29
1923	1,089,123,614	675,765,662	83,002,669	758,768,331	69.67
1924	1,007,832,658	639,729,824	71,755,000	711,484,824	70.60
1925	998,355,506	619,090,051	71,058,000	690,148,051	69.13
1926	998,180,492	617,926,038	70,989,000	688,915,038	69.02
1927	995,509,739	611,922,033	69,963,000	681,885,033	68.50
1928	991,576,496	610,473,498	71,286,000	681,759,498	68.75
1929	997,701,484	606,474,060	72,159,000	678,633,060	68.20
1930	998,981,981	604,934,916	72,398,983	677,333,899	67.80
1931	880,432,053	504,929,139	66,106,639	571,035,778	64.86
1932	569,330,822	338,537,832	37,841,311	376,379,143	66.11
1933	519,367,483	301,333,941	34,494,645	335,828,586	64.66

(1) Includes farm improvements.

Note: Taxable value of farm lands taken from published reports of the state board of equalization. Taxable value of farm personalty derived from abstract of tax lists reports for the years 1917 to 1923 (listed as published in Bulletins and reports issued by State Tax Commissioner) also derived from same source for years 1930, 1931 and 1932. Data for years 1924-1929 is partly estimated.

42 Deft's Ex. Y.

B. M.

Table —33— (L. A. Baker)

Average Tax Rate on All Property Subject to General Property Tax 1920-1933

Year	Taxable value all property (1)	Total property taxes (2)	Average tax rate
1920	$1,501,359,358	$29,766,078	1.98%
1921	1,377,427,843	31,188,020	2.26
1922	1,308,315,404	30,411,396	2.32
1923	1,089,123,614	29,793,046	2.74
1924	1,007,852,658	29,439,688	2.92
1925	998,355,506	28,913,217	2.90
1926	998,180,492	28,249,320	2.83
1927	995,509,739	30,171,206	3.03
1928	991,576,496	30,191,446	3.04
1929	997,701,484	29,747,616	2.98
1930	998,981,981	30,397,793	3.04
1931	880,432,053	27,957,827	3.18
1932	569,330,822	22,529,106	3.96
1933	519,367,483	21,479,674	4.14

(1) Reports of the state board of equalization and state tax commissioner of North Dakota.

(2) School poll taxes are excluded except for the years 1922 and 1924 when they were not separately given in published reports. Road poll tax law was repealed in 1931, but road polls are included in above tabulation for years prior to 1930 as they were not separately reported. All poll taxes and special property taxes are excluded for the years 1930 to 1933 inclusive.

343 Defts. Ex. Z.

B. M.

Table — 34 — (L. A. Baker)

Estimated Property Tax Burden on Farm Lands and Farm Personalty
1920 — 1933

School poll taxes, motor vehicle license taxes and gasoline taxes have not been included. State and federal income taxes have not been included. The tax burden on farm owners and operators in this table is measured by taxes imposed on property used in the business of farming and on farm household goods, clothing, etc.

Year	Taxable value of farm lands & farm personalty (1)	Average tax rate on all property (2)	Average tax rate on farm property. (87% of previous column) (3)	Tax burden on farm property
1920	$1,106,155,799	1.98%	1.72%	$19,025,880
1921	991,667,430	2.26	1.97	19,535,848
1922	945,770,774	2.32	2.02	19,104,570
1923	758,768,331	2.74	2.38	18,058,686
1924	711,484,824	2.92	2.54	18,071,715
1925	690,148,051	2.90	2.52	17,391,731
1926	688,915,038	2.83	2.46	16,947,310
1927	681,885,033	3.03	2.64	18,001,765
1928	681,759,498	3.04	2.64	17,998,451
1929	678,633,060	2.98	2.59	17,576,596
1930	677,333,899	3.04	2.65	17,949,348
1931	571,035,778	3.18	2.77	15,817,691
1932	376,379,143	3.96	3.45	12,985,080
1933	335,828,586	4.14	3.60	12,089,829

(1) Taxable value of farm lands as reported in published reports of state board of equalization. Taxable value of farm personalty derived from abstract of tax lists reports of county auditors to state tax commissioner. Taxable value of farm personalty for years 1924 to 1929 inclusive is partly estimated as abstract of tax lists reports of county auditors were destroyed when the State Capitol burned in 1930.

(2) Average tax rate on all property derived from published data contained in reports of state board of equalization.

(3) Average tax rate on farm property in several exhaustive investigations for different years was found to be 87% of the state average. This ratio has been used as the basis of the above estimate. Original data in connection with said investigations was destroyed when the State Capitol burned in 1930. The average tax rate on farm property in above table is considered to be sufficiently accurate to derive a true picture of the tax burden of the farmer on farm property for the years given.

344 Defts. Ex. Z-1.

B. M.

Table — 35 — (L. A. Baker)

Comparison of Gross Income From Agriculture and Livestock Production in North Dakota With Taxes Levied on Farm Property 1924–1932

Year	Gross income from agriculture and livestock production	Taxes on farm lands and farm personalty	Ratio	Index of gross farm income — 1924 = 100%
1924	$ 300,506,000	$ 18,071,715	6.01%	100%
1925	274,952,000	17,391,731	6.33	92
1926	209,132,000	16,947,310	8.10	70
1927	268,535,000	18,001,765	6.70	89
1928	249,585,000	17,998,451	7.21	83
1929	211,942,000	17,576,596	8.29	71
1930	147,931,000	17,949,348	12.13	49
1931	72,716,000	15,817,691	21.75	24
1932	71,364,000	12,985,080	18.20	24

Comparison of Cash Income From Agriculture and Livestock Production in North Dakota With Taxes Levied on Farm Property 1924–1932

Year	Cash income from agriculture and livestock production	Taxes on farm lands and farm personalty	Ratio	Indices–1924=100%	
				Cash farm income	Taxes
1924	$ 279,900,000	$ 18,071,715	6.46%	100%	100%
1925	250,646,000	17,391,731	6.94	90	96
1926	185,009,000	16,947,310	9.16	66	94
1927	245,719,000	18,001,765	7.33	88	100
1928	227,810,000	17,998,451	7.90	81	100
1929	189,748,000	17,576,596	9.26	68	97
1930	129,184,000	17,949,348	13.89	46	99
1931	59,622,000	15,817,691	26.53	21	88
1932	60,626,000	12,985,080	21.42	22	72

Comparison of Gross Operating Revenues of The Great Northern Railway Company in North Dakota With Taxes Levied on Operating Property 1924–1933.

Year	Gross operating revenues	Taxes levied on operating property	Ratio	Indices–1924=100%	
				Gross operating revenues	Taxes
1924	$ 19,399,759	$ 1,717,549	8.85%	100%	100%
1925	20,709,272	1,720,111	8.31	107	100
1926	21,169,076	1,686,104	7.96	109	98
1927	21,972,497	1,759,647	8.01	113	102
1928	24,894,745	1,781,732	6.84	128	104
1929	22,523,436	1,745,785	7.75	116	102
1930	18,681,284	1,796,399	9.62	96	105
1931	13,881,026	1,828,860	13.18	72	106
1932	10,501,981	1,445,594	13.76	54	84
1933	11,767,233	1,508,352	12.82	61	88

345 Defendant's Exhibit Z-2.

To the State Board of Equalization, State of North Dakota:

Statement on Behalf of Great Northern Railway Company in the Matter of Assessment of Railroad Property for the Year 1933.

We find by reference to published proceedings of the North Dakota State Board of Equalization that for the year 1923 the assessed valuation of the Great Northern operating property amounted to 5.68% of the total assessed valuation of all property in the state. Because of reductions allowed in the assessed valuation of other property, without a corresponding reduction in the assessed valuation of the Great Northern Railway Company, this company's proportion of the total assessed valuation has not been less than for the year 1923, but has been constantly increasing, until for the year 1932 the Great Northern assessed valuation was 6.93% of the total assessed valuation of all property in the state. This is an increase of 22% in this company's proportion of the total for the state.

We further find by comparison of 1932 assessments with 1930 assessments that the total assessed valuation of all property in the state, except Great Northern, decreased 15.36%,

that the total assessed valuation of all railroads de-
346 creased 11.47%, and that for the same period the Great Northern assessed valuation was reduced only 5.34%. In other words, the Great Northern assessment since 1930 was reduced about one-half the percentage the total for all railroads was reduced and only one-third as much as the total assessed valuation of all property in the state, except Great Northern, was reduced. It, therefore, clearly appears that the railroads, and especially the Great Northern, have been compelled to carry an increased load because of the greater reductions in assessed valuations allowed other property than has been allowed the Great Northern and the other railroads.

It is difficult to understand how so small a reduction as has been allowed the Great Northern in the past two years can be justified, when all factors usually employed to determine the value of railroad property for taxation indicate a decrease of not less than 25%, and many factors indicate a decrease in value of more than 50%.

We protest and contend that the Great Northern 1932 assessment was excessive as compared with the assessment of other property, and that said assessment was greatly in excess of the value which may be fairly assigned to the State of North Dakota by consideration of system value and
347 allocation to the state by methods usually employed to determine the value of railroad properties for taxation. Every factor or index of value clearly shows that the value of the Great Northern Railroad on date of assessment this year was less than it was a year ago.

Month after month for more than three and a half years the monthly reports of this company to the Interstate Commerce Commission have shown that gross revenues were materially less than for the corresponding month in the previous year. A railway company which must depend for its existence upon the revenue it receives can not long survive such conditions.

This company's Gross Operating Revenues for the year 1930 amounted to $104,996,076. This amount is from $5,000,000 to $20,000,000 less than the gross revenue for any year since 1922. However, this company's gross revenue for 1932 was only $55,549,246, or $49,446,830 less than for the year 1930. This is a decrease in gross revenue during the past two years of over 47%.

The Net Railway Operating Income for 1930 was $21,912,508. This amount is from 10% to 30% less than for any

year since 1922, but the Net Railway Operating Income for 1932 was only $1,290,551, or $20,621,957 less than for the year 1930. This is a decrease in net income during the past two years of 94%. In other words, the 1932 net income is less than 6% of the 1930 net income.

348 The average market value of the capital stock and bonds of this company for the year 1932 was 48% less than for the year 1930.

Railroad values in 1930 had fallen to a point far below values for prior years, but let us note what has happened during the past year and make a few comparisons for the year 1932 with 1931.

The Gross Operating Revenues of this company decreased 20%.

The Net Railway Operating Income decreased 90%.

The total market value of the Great Northern Stocks and Bonds decreased 35%.

The annual report of this company shows that the net income for 1932 from all sources resulted in a deficit of $13,404,439. In other words, the Great Northern last year failed by over $13,000,000 to earn enough to pay taxes and interest on bonds. No dividends have been paid on Great Northern stocks since 1931.

The decrease in value of the Great Northern Railroad as indicated by stock market quotations, net income, or any other measure of value, has been so great that any estimate of value computed by use of five year averages is
349 grossly excessive when compared with the same computations for a shorter period.

However, we present herewith Table I, which shows the market value of the Great Northern stocks and bonds at the average market price for the five year period 1928-1932 amounted to the sum of $513,982,795. This amount was computed at the average of high and low prices for each month in the period. The amount deducted for value of securities of other companies is the total of the non-operating assets set forth in detail under Table IV, page 7 of the report to the North Dakota Tax Commissioner. Making allowance for non-operating assets leaves as the stock and bond value of the operating property the amount $337,834,809.

This statement also shows the average Net Railway Operating Income for the five year period capitalized at the rate of 6%, which produces a system value by this method

in the amount $332,080,233. The average of these two amounts is $334,957,521. Please note that the amount by stock and bond method is greater than the amount by capitalization of income, and that the average of the two amounts is over $2,900,000 greater than the amount obtained by capitalization of income.

This statement shows the proportion of the system value assigned to the State of North Dakota by use of the
350 composite ratio which gives equal weight to each of the four factors: Mileage All Tracks Operated, Car and Locomotive Mileage, Revenue Traffic Units and Gross Operating Revenues. The North Dakota proportion of the average system value computed as herein set forth is $64,814,280. This amount is $14,035,744 less than the assessed value of this company's property for the year 1932.

This statement further shows North Dakota's proportion of the system value by use of the composite ratio which gives equal weight to the three factors: Car and Locomotive Mileage, Revenue Traffic Unit and Gross Operating Revenues. This three factor composite ratio was used as the proper ratio for allocation of system value in recent railway tax cases in North and South Dakota. North Dakota's proportion by the three factor ratio, 19.14%, is $64,110,870, as clearly set forth in Table I. This amount is $14,739,154 less than the assessed valuation of this company's property for the year 1932.

Table II, hereto attached, shows the amounts for the three year period 1930-1932 computed in the same manner as Table I, except that the value of securities of other companies was computed by capitalization at the rate of 6%, the average annual interest and dividends received from
351 such securities during the past three years. The actual value of all of the securities of other companies owned by the Great Northern is undoubtedly greater than the amount so computed, for the reason that this method does not assign any value to stocks and bonds which did not pay any dividends or interest during the period considered. This low estimate of the value of non-operating assets leaves a larger amount as the value of the operating property. Making allowance for non-operating assets at the conservative amounts computed as above set forth, leaves by the stock and bond method the amount $285,498,752.

This statement, Table II, also shows the average Net Railway Operating Income for the past three years, capitalized at the rate of 6%, which produces a system value by this method in the amount of $199,291,550.

The average of the two system values as above computed is $242,395,151.

We again direct attention to the fact that the amount by stock and bond method is greater than the amount by capitalization of income and the average of the two amounts is over $43,000,000 greater than the amount obtained by capitalization of income.

352 North Dakota's proportion of the average system value by use of the four factor composite ratio, 19.35%, is $46,903,462, and by use of the three factor ratio, 19.14%, gives North Dakota $46,394,432. Both of these computed values are more than $30,000,000 less than this company's property was assessed for the year 1932, and clearly indicate that the Great Northern is justly entitled to a reduction of more than 40% below the assessment of its property for the year 1932.

To further show the great decrease in the value of the operating property of the Great Northern Railway Company, we have prepared, and submit herewith, Table III, which shows the computations from date for the single year 1932 computed in the same manner as Table II. The computed value for North Dakota by use of the figure for the single year 1932 is less than $25,000,000, which amount is less than one-third of the assessed valuation of this company's property for the year 1932.

We again direct attention to the fact that the amounts stated in these tabulations are materially greater than could be obtained by the single method of capitalization of net railway operating income.

Another method of allocation of system value to the several states is suggested by the data called for under
353 Table IX, page 15, of the railway company's report to the North Dakota Tax Commissioner. This method is referred to by various names, such as Physical Property, Interstate Commerce Commission Valuation plus Additions and Betterments, Cost of Reproduction New, or Cost of Reproduction less Depreciation.

The Great Northern report shows North Dakota's proportion of the Interstate Commerce Commission valuation plus additions and betterments, without any allowance for depreciation, is 14.32% of the total for the system. This percentage is less than any figure we have used in the composite ratios for allocation, so that to use this method alone or in combination with any or all of the other factors would re-

duce the amounts we have set forth in our computations as the proportion of the system value assignable to North Dakota.

Let us briefly review the results of the computations which we have set forth in detail:

The computed valuation for North Dakota by use of five year average, Table I, is $64,814,280

The computed valuation for North Dakota by use of the averages for the past three years, Table II, is $46,903,462

The computed valuation for North Dakota by capitalization of net railway operating income and market value of stocks and bonds for the past year, Table III, is $24,733,390

354 We respectfully submit that this company is justly entitled to a reduction in its assessment for 1932, and urgently request that the Great Northern assessment be fixed at an amount not in excess of $60,000,000.

Respectfully submitted,

GREAT NORTHERN RAILWAY COMPANY,
By W. L. Schoettler,
Assistant Right of Way, Land & Tax Commissioner.

James T. Maher,
Right of Way, Land &
Tax Commissioner.

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355 Table I.

Great Northern Railway Company
North Dakota

1933

Average Market Value for the Five Year period ending December 31, 1932	
Stock,	$173,854,616
Bonds,	340,128,179
Total Table III Report to Tax Commissioner,	$513,982,795
Non-Operating Assets—Table IV	176,147,986
Stock and Bond Value of Operating Property	$337,834,809

Capitalization 5 Year Average Net Railway Operating Income at 6% — 332,080,233

Average System Value, — 334,957,521

North Dakota's Proportion:

1. Mileage All Tracks	(1932)	19.96%	
2. Car & Locomotive Mileage	(5 yr. Av.)	20.04	
3. Revenue Traffic Units	(5 yr. Av.)	18.93	
4. Gross Operating Revenues	(5 yr. Av.)	18.45	
Average 1, 2, 3 and 4	(A)	19.35%	- $ 64,814,280
" 2, 3 and 4	(B)	19.14%	- 64,110,870

Assessed Valuation - 1932 — $78,850,024

Assessed Valuation in Excess of Computed Value (A) — $ 14,035,744
" " " " " " " " (B) — 14,739,154

Tax Division
St. Paul, Minnesota.
July - 1933.

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Table II.

Great Northern Railway Company
North Dakota

1933.

Average Market Value of the Three Year Period Ending December 31, 1932

Stock,		$116,649,234
Bonds,		385,373,407
Total as Reported to Oregon Tax Commission		$442,022,641

Less Deductions for Non-Operating Assets
Interest and Dividends from Securities of Other Companies including C. B. & Q. Stock
1930 - $13,600,243
1931 - 10,063,971
1932 - 3,340,085

Average - $ 9,001,433
Capitalized at 6% — $130,023,889

Land Grant Lands — 1,000,000

Locally Assessed Property — 5,500,000 — 156,523,889

Stock and Bond Valuation Operating Property, — $285,498,752

Capitalization Net Railway Operating Income 1930-1932 Average $11,957,493 Capitalized at 6%		199,291,550
Average System Value,		$242,395,151
North Dakota Proportion (A)	19.35% - - -	$ 46,903,462
(B)	19.14% - - -	46,394,432
Assessed Valuation - 1932	$78,850,024	
Assessed Valuation in Excess of Computed Value (A)		$ 31,946,562
" " " " " " " (B)		32,455,592

Tax Division
St. Paul, Minnesota.
July - 1933.

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Table III.

Great Northern Railway Company
North Dakota

1933

Average Market Value for the Year ending December 31, 1932		
Stock,		$ 32,830,915
Bonds,		263,470,262
		$296,301,177
Less Deductions for Non-Operating Assets Interest and Dividends from Securities of Other Companies including C. B. & Q. Stock 1932 - $3,340,085 Capitalized at 6%	$55,668,083	
Land Grant Lands,	1,000,000	
Locally Assessed Property,	5,500,000	62,168,083
Stock and Bond Valuation Operating Property		$234,133,094
Capitalization Net Railway Operating Income 1932 - $1,290,551 Capitalized at 6%		$ 21,509,183
Average System Value,		$127,821,139
North Dakota Proportion (A)	19.35% - - - -	$ 24,733,390
(B)	19.14% - - - -	24,464,966
Assessed Valuation - 1932	$78,850,024	

Assessed Valuation in Excess of Computed Value (A) $ 54,116,634
" " " " " " " (B) 54,385,058

Tax Division
St. Paul, Minnesota.
July - 1933.

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358 Stipulation Approving Statement of Evidence.

It Is Hereby Stipulated And Agreed that the foregoing statement consisting of 217 typewritten pages together with plaintiff's exhibits 1 to 23, inclusive, and defendants' exhibits A to Z and Z-1 and Z-2, inclusive, may be accepted, assigned, settled and allowed as the Statement of Evidence in the above entitled matter and that the same includes all the evidence offered and received at the trial and the proceedings, objections, rulings and exceptions made, taken and rendered on the trial of said cause and that the same may be settled by the court as the Statement of Evidence herein.

C. J. MURPHY,
T. A. TONER,
Solicitors for Plaintiff.

P. O. SATHRE,
HAROLD SHAFT,
Solicitors for Defendants.

Dated this 4th day of January, 1935.

Endorsed on the face as follows: "Filed Jan. 5, 1935, J. A. Montgomery, Clerk."

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359 Order Approving Statement of Evidence.

Upon the foregoing stipulation, the foregoing statement consisting of 217 typewritten pages, together with plaintiff's exhibits 1 to 23, inclusive, and defendants' exhibits A to Z, inclusive, and Z-1 and Z-2, is hereby settled and allowed as a full, true and complete transcript of all the evidence introduced at the trial of the above entitled cause, and includes all the objections, rulings, exceptions and proceedings had and taken at the trial of said cause, and the same is hereby duly allowed as the Statement of Evidence herein.

Dated at Fargo, N. D., this 5th day of January, 1935.

ANDREW MILLER,
Judge of the United States District Court for the District of North Dakota.

Endorsed on the face as follows: "Filed Jan. 5, 1935. J. A. Montgomery, Clerk."

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360 Stipulation as to Contents of Transcript of Record.

It Is Hereby Stipulated And Agreed by and between the solicitors for the respective parties that the Transcript of Record to be filed in the Circuit Court of Appeals for the Eighth Circuit, pursuant to the appeal heretofore allowed herein shall include the following:

(1) Subpoena in chancery; but the various returns thereto may be omitted and in lieu thereof the Clerk may incorporate an appropriate memorandum showing that proper service was made.

(2) Bill of Complaint.

(3) Answer to Bill of Complaint.

(3-a) Record of Trial.

(4) Statement of Evidence.

(5) Plaintiff's Exhibits 1 to 23, inclusive, and Defendants' Exhibits A to Z, inclusive, and Z-1 and Z-2.

(6) Findings of Fact and Conclusions of Law.

(6-a) Proposed Findings of Fact and Conclusions of Law.

(7) Decree.

(8) Petition for Appeal.

(9) Assignment of Errors.

(10) Order Allowing Appeal.

(11) Citation on Appeal with service thereon.

(12) Bond on Appeal with the Court's approval thereon.

(13) Order Extending Time in which to perfect appeal.

(14) This stipulation.

Dated this 4th day of January, 1935.

C. J. MURPHY,
T. A. TONER,
Solicitors for Plaintiff.

P. O. SATHRE,
HAROLD SHAFT,
Solicitors for Defendants.

Endorsed on the face as follows: "Filed Jan. 5, 1935. J. A. Montgomery, Clerk."

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361 Citation on Appeal.

Filed Nov. 8, 1934. J. A. Montgomery, Clerk.

Great Northern Railway Company, Plaintiff,

vs.

J. J. Weeks, State Tax Commissioner, J. M. Baillie as Auditor and L. T. Halvorson as Treasurer of Barnes County; G. A. Gilbertson as Auditor and W. D. Conway as Treasurer of Benson County; Ole Colbornson as Auditor and Sam H. Wilson as Treasurer of Bottineau County; H. F. Magedanz as Auditor and Jerry Donovan as Treasurer of Burke County; F. Ford Doherty as Auditor and C. A. Baumgartner as Treasurer of Cass County; Otto Rasmusson as Auditor and A. A. Wilson as Treasurer of Cavalier County; John A. Dawe as Auditor and H. J. Oberman as Treasurer of Dickey County; R. H. Lynch as Auditor and O. A. Steffler as Treasurer of Divide County; S. W. Lyman as Auditor and Hugh Peoples as Treasurer of Eddy County; J. B. McWethy as Auditor and M. P. Roberts as Treasurer of Foster County; Martin O. Haugen as Auditor and John Sandbek as Treasurer of Grand Forks County; P. A. Melgard as Auditor and R. J. Howden as Treasurer of Griggs County; E. W. Olson as Auditor and Oscar R. Fisher as Treasurer of McHenry County; Arne Tollefson as Auditor and Oluf Erickson as Treasurer of McKenzie County; F. J. Haines as Auditor, and Nels Hofland as Treasurer of Mountrail County; Peter Jorgenson as Auditor and J. J. Schindele as Treasurer of Nelson County; Wm. W. Felson as Auditor and J. H. Hannesson as Treasurer of Pembina County; O. A. Spillum as Auditor and O. T. Tofsrud as Treasurer of Pierce County; J. O. Peterson as Auditor and F. J. Burckhard as Treasurer of Ramsey County; C. E. Colcord as Auditor and W. C. Budke as Treasurer of Renville County; George J. Fischer as Auditor and Karl L. Mikkelson as Treasurer of Richland County; Jas. H. Penny as Auditor and Allister McKay as Treasurer of Rolette County; R. W. Safstrom as Auditor and H. O. Webster as Treasurer of Sargent County; G. H. Mustad as Auditor and Florence Carlson as Treasurer of Steele Coun-

ty; A. T. Mooney as Auditor and John Gang as Treasurer of Towner County; Gerhard D. Olson as Auditor and Thomas P. Strand as Treasurer of Traill County; W. J. LaMarre as Auditor and Benj. A. Gudajtes as Treasurer of Walsh County; A. G. Torgerson as Auditor and Bert A. Balerud as Treasurer of Ward County; Otto G. Krueger as Auditor and Edith Darcy as Treasurer of Wells County; Morten Mortensen as Auditor and Oscar N. Lee as Treasurer of Williams County, all of the State of North Dakota, Defendants.

United States of America—ss.

To the Above Named Defendants—Greeting:

362 You and each of you are hereby cited and admonished to be and appear in the United States Circuit Court of Appeals for the Eighth Circuit at the City of St. Louis, State of Missouri, within forty days from the date hereof pursuant to an order allowing the appeal from the District Court of the United States for the District of North Dakota in a suit wherein Great Northern Railway Company is appellant and you are appellees to show cause, if any there be, why the decree rendered against said Great Northern Railway Company should not be corrected and why speedy justice should not be done to the parties in that behalf.

Witness the Honorable Andrew Miller, Judge of the District Court of the United States this 8th day of November, 1934.

ANDREW MILLER,
Judge for the District Court, for the District of North Dakota.

Service of a copy of the foregoing citation is acknowledged this 8 day of November, 1934.

P. O. SATHRE,
Atty. General,
Solicitor for Defendant.

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363 (Clerk's Certificate to Transcript.)

United States District Court,
District of North Dakota—ss.

I, J. A. Montgomery, Clerk of the United States District Court for the District of North Dakota, do hereby certify

that the foregoing pages, from 1 to 362, both inclusive, contain true and faithful transcripts of all pleadings, process and proceedings of record and on file in my office as said Clerk, and the whole thereof, and the endorsements thereon, as designated by a stipulation on file, in the case of "Great Northern Railway Company, a corporation, Plaintiff, versus J. J. Weeks, et al., Defendants."

Witness my hand and the seal of said Court, at Fargo, in said District, this 7th day of January, A. D. 1935.

(Seal)
U. S. Dist. Court
Dist. of No. Dak.

J. A. MONTGOMERY, Clerk,
By E. A. Steele, Deputy.

Filed Jan. 10, 1935. E. E. Koch, Clerk.

[fol. 308] Appearances of counsel omitted in printing.

[fol. 309] IN UNITED STATES CIRCUIT COURT OF APPEALS, EIGHTH CIRCUIT

ORDER OF SUBMISSION—March 14, 1935

This cause having been called for hearing in its regular order, argument was commenced by Mr. F. G. Dorety for appellant, continued by Mr. Harold D. Shaft for appellees, and concluded by Mr. F. G. Dorety for appellant.

Thereupon this cause was submitted to the Court on the transcript of the record from said District Court and the briefs of counsel filed herein.

[fol. 310] IN UNITED STATES CIRCUIT COURT OF APPEALS, EIGHTH CIRCUIT

March Term, A. D. 1935

No. 10,221

GREAT NORTHERN RAILWAY COMPANY, Appellant,

vs.

J. J. WEEKS, State Tax Commissioner, et al., Appellees

Appeal from the District Court of the United States for the District of North Dakota

Before Stone, Sanborn and Faris, Circuit Judges

Mr. F. G. Dorety (Mr. C. J. Murphy was with him on the brief), for appellant.

Mr. Harold D. Shaft (Mr. P. O. Sathre was with him on the brief), for appellees.

OPINION—April 25, 1935

STONE, Circuit Judge, delivered the opinion of the court:

The Board of Equalization of the State of North Dakota made an assessment of the property of appellant in August,

1933, under statutes requiring such assessments to be at the "true and full value in money". The result of this assessment was allocated to the various counties containing mileage of the railway and such allocated amounts were certified to the auditors and treasurers of such counties. Appellant filed this suit in the District Court for the Dis- [fol. 311] trict of North Dakota against the State Tax Commissioner and the auditors and treasurers of these several counties whereby it sought to enjoin the collection of forty-three per cent of the taxes based upon such assessment on the ground that the assessment was invalidly excessive to that extent. Appellant paid something more than the amount of taxes it deemed to be due; issues as to the validity of the assessment were joined; a full hearing was had; and the court made findings and entered a decree dismissing the bill for want of equity. From such decree this appeal is brought.

Appellant presents here two main contentions. Both of them are based on the proposition that the assessment is grossly excessive. The first contention is that this excess is caused by including within the assessment property outside of the State of North Dakota. The second is that the excess was occasioned by the arbitrary action of the Board.

I. Out-state Property

Not every excessive State assessment of property which is a part of interstate property permits the issue that the assessment results in taxation of out-State property. That issue is open only where it is established that the assessment value was reached by the use of certain methods or formulae and that such use has resulted in inclusion of out-State property. Such methods and formulae are those having to do with allocation of State value from system value. Two successive steps are thus involved in such a contention: first, establishment that certain methods or formulae were used by the assessing officials; second, that the use of such methods or formulae resulted in the inclusion of out-State property in the value assessed within the State.

The trial court expressly found:

"That at no time within the past ten years has the State Board of Equalization adopted any specific or definite for-

mula or method of calculating the value of the railroads operating in the state of North Dakota, but the State Board of Equalization has at all times had before it, at the time of making such assessments, tables and formulas prepared by the railroads and the office of the Tax Commissioner of the state, and has considered the same in arriving at its assessments, but never has adopted the exact result of any [fol. 312] of said tables, formulas or methods of computation of railroad valuations."

If this finding is sustained by the evidence, there is no basis for the issue that out-State property is included in the assessment.

Appellant's contention is that the State Board made no independant determination of assessment for 1933 but merely adopted the assessment of 1932; that the assessment for 1932 was determined according to a definite method; that such method was as follows:

"the state taxing authorities first determined a value for the entire railroad system including the property located in other states. They capitalized the average net annual earnings of the entire railroad property for the five year period ending with the year preceding the assessment at the rate of 6% to determine an earnings value of the system. They then determined the average total market price of appellant's outstanding securities (stocks and bonds) for the same period, thus obtaining a total market price of these securities, which represented ownership not only of the railroad property but also of all other assets of the appellant not forming any part of its railroad and subject to local taxation in other jurisdictions. They then apportioned a part of this total securities price to the railroad property alone, this apportionment being made one-half in proportion to relative cost or investment, and one-half in proportion to the respective net earnings of the railroad and non-railroad properties. Having thus determined a 'stock and bond' value for the railroad property alone, they averaged this 'stock and bond' value with the 'earnings' value obtained as above stated, thus determining a system value of the railroad property as of the date of assessment. Of course, this system value included all of the railroad properties of the Great Northern in all of the eight states."

"They then attempted to allocate a portion of this system value to the state of North Dakota upon a composite allocation factor which included the following proportions: 'miles of all track' (single year), 'car and locomotive miles' (five year average), 'ton and passenger miles' (five year average), 'gross revenues earned' (five year average), and 'physical property' (single year). In the 'gross revenues' attributed to the state of North Dakota were included a proportion of the gross revenue on each interstate shipment or [fol. 313] trip performed in any part in North Dakota, equal to the proportion of road miles in North Dakota to the total road miles traversed by that particular shipment. The amount of physical property in North Dakota and on the system was measured by estimated cost of reproduction less depreciation. An average of these five factors was applied to the system value to produce a value for North Dakota, and the State Board of Equalization then adopted a 'judgment' figure approximating but not conforming identically to it."

Appellant contends that the answer does not deny and therefore admits that the above method (pleaded in the complaint) was the one used by the Board. The answer very clearly denies that such method was the sole basis of the Board's determination. In several places in the answer it appears that, in reaching its conclusion in 1933 and prior years, the Board had before it computations based on the above five elements and on various combinations of those elements and:

"that upon this evidence and upon all other evidence and matters of common knowledge before it the Board did in the year 1932 fix the valuation of plaintiff's property in North Dakota at $78,850,024.00.

"Defendants further allege that in the year 1933 the State Tax Commissioner and the plaintiff did present to the State Board of Equalization the financial and operating statistics of the plaintiff's railroad and reports and computations based upon the formulas used in 1932 and other evidence of value, and that the Board of Equalization after full consideration of said statistics, computations, reports, and all other evidence of value and matters of common knowledge, did fix the assessment of plaintiff's property in North Dakota for the year 1933 at $78,832,888.00, which said amount

represented the honest judgment of the State Board of Equalization and the true and full value of the plaintiff's North Dakota property in money.'"*

[fol. 314] These pleadings definitely presented the issue as to what extent the Board used the method declared in the petition or any other method. This leaves the solution of the issue to the evidence.

In its brief appellant states:

"While the Board of Equalization did not adopt this computation exactly but also considered computations made by the use of only a portion of the five allocation factors mentioned above (which produced even higher results for North Dakota), and also 'other evidence and matters of common knowledge' (T. 27), the assessment which it adopted approximated all of these computations and was slightly in excess of the computation produced by the five factor ratio which the state alleges to be the fairest one. It seems fair to conclude, therefore, that the method outlined above was the basis upon which the assessment was made, or at least that any errors which we can point out in the method described above are reflected in the assessment, in somewhat exaggerated form."

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*Other allegations in the answer are as follows:

"That the law above stated applies to the State Board of Equalization as well as assessors. The State Board of Equalization is thereby [Section 2122, Supplement to Compiled Laws of North Dakota, 1913-1925] required to exercise its best judgment and discretion as to the assessment of operating property of railroad companies and is required to assess such property at such amount as the Board believes such property to be fairly worth in money. Said law does not permit the State Board of Equalization to substitute for statutory and constitutional provisions, requiring the Board to exercise its judgment and discretion as to value, any arbitrary formula, method or rule based upon operating and financial statistics of railroads.

* * * * * * *

"The State Board of Equalization of the State of North Dakota and the taxing authorities of other states have used

From this quotation, it is clear that the proof of the fact that the Board used the above five factor method is based on the conclusions that because the Board's assessments for several years before 1933 were not far from what would have resulted by the use of that method and because the as- [fol. 315] sessment of 1933 was the same as for 1932, it must follow that such method was carried into the 1933 assessment. But the 1933 assessment is appreciably above the result which would have been reached by applying such method. No member of the Board was a witness. No witness pretended to know all that the Board might have considered. Witness Baker (who had nothing to do with this 1933 assessment but who was, until January, 1933, deputy Tax Commissioner for North Dakota and who prepared valuation data for the Tax Commissioner to present to the Board up to the time), testified as follows:

"The State Board of Equalization in North Dakota in deliberating on railroad assessments considered the evidences of value as presented in the briefs of the railroad companies and the evidences of value as shown in exhibits prepared by the Tax Department for their use and just what their final conclusions as to the assessments were, were, I believe, based

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and considered said formulas based upon the operating and financial statistics of railroads as evidence of the value of railroads but not as the exclusive source of evidence of value.

* * * * * * *

"Defendants allege that the State Board of Equalization pursuant to its constitutional and statutory duty considered the financial and operating statistics of the plaintiff and the computations of value based upon the accepted formulas together with all other evidence before it and matters of common knowledge including the conditions of the times and from all such evidence arrived at the assessment herein complained of as its honest judgment as to the full and true value of the plaintiff's property in North Dakota in money.

* * * * * * *

"Defendants further allege that all of the statistics, formulas and computations and all other evidence and mat-

upon their judgment in part and in part upon what the statistical data that they considered indicated.

* * * * * *

"The formulas that I have used in this case to a great extent are the ordinary and usual formulæ that have been given recognition either by the courts or are in general use by taxing bodies, and the State Board of Equalization gave such weight to the data as the Tax Commissioner presented to the Board as in their judgment it was entitled to. I cannot give any testimony as to just what weight was given to the evidence presented to them. There were two classes of evidence, that presented by the Tax Commissioner and that presented by the Railway Company.

* * * * * *

"In presenting these exhibits and tables, it has not been my intention to state that any of these formulæ produced a true valuation of the Great Northern Railway. My purpose has been to show that by the use of most any formula

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ters of common knowledge were considered by the Board in arriving at its 1933 assessment.

* * * * * *

"Answering Paragraph XVIII of plaintiff's complaint, defendants deny that the Board of Equalization deliberately, intentionally, or knowingly over-valued or over-assessed plaintiff's property or ignored any of the facts, figures or computations material to a determination of the value of plaintiff's property, and deny that any value of property located in other states was assessed in North Dakota, and deny that the board acted without logical processes of reasoning or basis of fact, and deny that said assessment was made arbitrarily, fraudulently or excessively and on the contrary these defendants allege that said assessment for 1933, and for all prior years, was made after full and fair consideration of all the facts herein set forth and of all other facts material to a determination of the value of plaintiff's railroad and that the assessment made in 1933 represented the honest, fair, and just determination of the Board of Equalization.

"Defendants allege that under the recognized, accepted and usual methods of ascertaining railroad values, the as-

that has been given any recognition the assessment in the four years immediately preceding 1933 could be justified and then I have shown what results were produced for the year 1933 by each method.

As to my statement that the excess in the 1933 assessment over the results produced by any of these tables operated [fol. 316] to some extent to condemn the 1933 assessment, I will say that the very best statistical evidence of value are not definite proof of value and there were a number of peculiar and extraordinary circumstances for the Board to consider in 1933 that are not in any way indicated by statistical exhibits. I do not feel that variance from the results produced by my table present an absolute showing of a wrongful assessment on the part of the State Board.

"When I say that the State Board of Equalization had unusual facts and circumstances before it in 1933, I refer to two different things, first, the general economic situation, not only in the United States, but particularly in the State of North Dakota, with an almost total collapse in the value of all property and with almost a total collapse in the income producing ability of property not only in North Dakota but generally; and the second matter to which I refer was the fact that in 1932 the people of North Dakota by an initiated law changed the tax base from 75% of full

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sessment for the year 1929 was approximately 100% of full and true value, for 1930 was approximately 96% of full and true value, for 1931 was approximately 96.5% of full and true value, and for 1932 was 100.3% of full and true value, and that the apparent over-assessment for the year 1933, if computed strictly upon the aribtrary formulas hereinbefore referred to is occasioned by the fact that the application of the arbitrary formulas hereinbefore referred to had lost most of their evidentiary value by reason of the panic conditions existing in 1933 as hereinbefore referred to, and that in order to arrive at any honest, fair, or just determination of the value of plaintiff's property in 1933 it was necessary to add to the results produced by such arbitrary formula large amounts in order to compensate for the artificially and unnaturally low prices of stocks and bonds as hereinbefore alleged, and for the temporary effect upon plaintiff's net earnings of the collapse of business generally throughout the world."

value to 50% of full value. Due to the various tax limitation laws limiting the tax levies of all classes of taxing districts this handicapped the various equalization boards and particularly the State Board of Equalization in reducing property values down to correspond to some extent to the drop in income and corresponding to the actual loss in value which had occurred. The tax base had been more than cut in two in a few years. In 1923 the tax base on a 75% valuation was approximately a billion and eighty-nine million. This had gradually shrunk and then was decreased by one-third in 1932 by reasons of the initiated law, and the various taxing districts, counties and school districts, (to a very large extent, were unable to levy sufficient revenue under the new tax base to meet ordinary running expenses.

"Referring to my statement that in computing the stock and bond values of the railroad, the state of the market during the portion of the year 1933 preceding the meeting of the Board of Equalization had not been taken into consideration, I will say that the three months preceding the date of the assessment or four months, showed a tremendous upward trend in the stock and bond market and we were in the middle of a boom during the months of May, June and July. When I speak of the stock and bond market, I include all stocks and bonds. There was a very sharp rise in Great Northern stock. I don't recall the extent of that rise."

[fol. 317] No other witness pretended to say what method or methods the Board had used or to what extent it had used any of them. We think appellant has failed to establish that the Board was guided by or was largely influenced by the use of any particular method and, therefore, is in no position to urge the contention that property outside the State has been brought into this assessment.

Even had appellant shown such reliance by the Board upon the five factor method, it would be in no position to take advantage of such in connection with this contention. The force of its attack upon that method is based upon the argument that, in the situation here, the only approximately true method of allocation was one using the comparative "expense of operation" in North Dakota and outside of that State or upon the system. Appellant presented the five factor method to the Board. It is undisputed that no

such method as now advanced was ever presented to the Board in this matter or in any other. In fact, this method has never been used by any railroad or tax commission so far as any of the witnesses knew and it was prepared subsequent to the making of this assessment. Certainly, this assessment should not be overthrown for a reason which the Board never heard of. More strongly is that true when (as shown by this evidence) there is grave doubt as to the verity and usefulness of the method now advanced.

II. Arbitrary Assessment

This contention is that even if the method of allocation of State value from system value is defensible and no out-State property has been included in the assessment, yet the Board has valued the property of appellant within the State "at a grossly excessive result by wholly arbitrary methods." The position of appellant is expressed in the brief thus:

"We believe that the excessiveness of the assessment coupled with the fact that the value was not computed as of that time but was adopted as of a previous year, is sufficient to condemn the assessment; but if not, we believe that the methods which were used in making the 1932 assessment make it wholly inapplicable and arbitrary for 1933."

In view of much of the argument of appellant (hereinafter to be examined), it is vital to keep in mind that not [fol. 318] only was the burden upon appellant to prove both excessive assessment and arbitrary action in reaching such result but, since this litigation involves the validity of State action, to prove such clearly and convincingly—there was no burden upon appellees to sustain the action of the Board. When the validity of State action is in controversy, it is the duty of courts to view the testimony critically from the sole standpoint of how completely and convincingly the challenger of such action has sustained his position. From this standpoint we are compelled to view this evidence.

While appellant presents its supporting argument under several headings, it is all based upon two matters: that the 1933 assessment is the same as that for 1932 and that it is excessive. From the fact that the assessments of these

two years are identical, appellant argues that no independent investigation or consideration was given to the situation existing at the time of the assessment for 1933 (August, 1933) but that the Board reached its conclusion upon the same basis, methods and facts as in 1932. The argument really is that because none of the calculations of the appellant or of the deputy Tax Commissioner justified the result reached by the Board and because the assessment was the same as in 1932, that the Board gave no weight or consideration to the situation and matters before it in 1933 and arbitrarily selected the assessment for the year 1932. No such assumption necessarily follows: It may have been true or it may not. It was for appellant clearly to establish that it was true. Appellant urges that this conclusion must be accepted because appellees did not deny these matters in the pleading nor did they meet them in the proof by placing the members of the Board on the stand and from them disclose what they actually did. Certainly there is no such admission in the answer. The issue was directly presented in the pleadings. Nor is any strength to be gained from appellees not putting the Board members on the stand. No burden of proof rested on appellees. No inference unfavorable to appellees can be drawn from such action since the Board members were, if proper witnesses, as available to the appellant as to appellees. The burden of clearly proving its case remained with appellant from the beginning. It could stop when it felt it had sufficiently established its case. If it closed before it had reached that point and has failed to introduce evidence known to exist it cannot have advantage therefrom where the evidence is open to it to produce.

[fol. 319]. The evidence reveals the following: that the Board had before it data and calculations, by various methods, presented by appellant which referred to the 1933 assessment; that in prior years, calculations by various methods prepared by the deputy Tax Commissioner had been before it; that before 1933, it had "used" the five factor method (to what extent or just how does not appear); that the assessments of former years had never tracked any of the known methods; that, measured by any of the methods, the assessments for 1929 were approximately 101%, for 1930 approximately 96%, for 1931 approximately 97% and for 1932 approximately 101%; that,

by any of the methods, the assessment for 1933 was from 115.27% to 121.72%; that since 1918, the movement of annual assessments of appellant's property by the Board had been as follows, in 1919 a reduction of 4% ($3,683,000), in 1921 a reduction of 5% ($4,332,252), practically no change until 1929 when an increase of 1.25% ($1,028,291), no appreciable change in 1930, in 1931 a reduction of $294,691, in 1932 a reduction of 5% ($4,149,973), in 1933 no change; that no formula nor combination of formulae has been found to be an accurate measure of value; that formulae are merely methods worked out to aid in solving the difficult matter of value; that there is decided difference of opinion between students of values as to the relative worth of different formulae and as to their use in different situations; that there is no evidence of any deliberately arbitrary or wrongful assessment concerning years prior to 1933; that there is no evidence of what use was made by the Board of any formula either in 1933 or prior years; that there is no evidence as to how the Board reached its results in 1933 or prior assessments.

The value of anything is, in its nature, a matter of opinion. Where the value involved is market (or sales) value, the determination of such opinion may be accurately made, where the thing to be valued is bought and sold on an active recognized market by current prices in sales on such market. Where the thing is not such as is sold on an active recognized market but is the subject of sale (such, for example, as real estate) determination of opinion as to value is rarely subject to accurate demonstration but must be the result of the judgment (of the trier of the fact of value) applied to various and usually inharmonious evidences and also expressions of expert opinion presented to it. Where [fol. 320] the thing to be valued is rarely or never the subject of sale (as here), the task of determining value reaches the limit in difficulty, complexity and uncertainty. This difficulty appears in this evidence, is expressly stated by the witnesses and it has been universally recognized by courts. The most recent judicial announcement thereof is contained in a fine, concise statement (with a wealth of citations) by Mr. Justice Butler in Rowley v. C. & N. W. Ry., 293 U. S. 102, 109, as follows:

"The ascertainment of the value of a railway system is not a matter of arithmetical calculation and is not governed

by any fixed and definite rule. Facts of great variety and number, estimates that are exact and those that are approximations, forecasts based on probabilities and contingencies have bearing and properly may be taken into account to guide judgment in determining what is the money equivalent—the actual value—of the property. Boom Co. v. Patterson, 98 U. S. 403, 407, et seq. Cleveland, C., C. & St. L. Ry. Co. v. Backus, 154 U. S. 439, 445. Adams Express Co. v. Ohio, 166 U. S. 185, 220. Brooklyn City R. Co. v. New York, 199 U. S. 48, 52. Omaha v. Omaha Water Co., 218 U. S. 180, 202-203. Minnesota Rate Cases, 230 U. S. 352, 434, 454. Branson v. Bush, 251 U. S. 182, 185-188. Southwestern Bell Tel. Co. v. Pub. Serv. Comm'n, 262 U. S. 276, 287. United States v. New River Collieries, 262 U. S. 341. Brooks-Scanlon Corp. v. United States, 265 U. S. 106, 123-126. Standard Oil Co. v. Southern Pacific Co., 268 U. S. 146, 155, et seq. McCardle v. Indianapolis Water Co., 272 U. S. 400, 410, 414. Olson v. United States, 292 U. S. 246, 255, et seq. The apportionment of system value between Wyoming and the rest of the system involves the finding of the value of the portion of the railroad that is located in that State. The problem is quite like the ascertainment of the value of the whole. The determination is to be made in the exercise of a reasonable judgment based on facts so pertinent and significant as to be of controlling weight as indications of the value of the property."

Because of the character of the problem of value and the difficulty of its solution, courts have properly concluded that a determination thereof by them—on review—is no more likely to be correct than the result reached by the person or body whose action is under review. In short, they will not substitute their judgment for that of the other (Rowley v. C. & N. W. Ry., 293 U. S. 102, 111-112). Where the original determination is a legislative function (directly [fol. 321] or through administrative agencies created by the legislature for that purpose), the judicial function can operate only to keep the exercise of such legislative action within the constitutional legislative limits. Those limits are that the legislative power shall be exercised in good faith, which means an honest effort to reach a right conclusion. It is not enough to show merely that there has (in the opinion of the court) been overvaluation but it must

also be shown that such good faith effort was lacking—that there was "an intention, or the equivalent of fraudulent purpose, to disregard the fundamental principle of uniformity" (Rowley v. C. & N. W. Ry., 293 U. S. 102, 111). Moreover, this bad faith (or arbitrary action) must be clearly and convincingly shown. Here, the original determination of this value was properly committed to the Board as an administrative agency created by and acting for the legislature of the State. Without determining that overvaluation is here shown, there remains the question of arbitrary action in reaching the result.

With the above principles in mind, it is obvious that the evidence here fails to show arbitrary action upon the part of the Board. That the Board had some reason for adopting the 1933 value must be taken as true in the absence of clear proof to the contrary. Whether that reason was so flimsy or based upon methods or considerations so shadowy that the result must be held to be arbitrary we cannot conclude from the above evidence which reveals nothing of what influenced the Board to its determination.

State action through proper administrative bodies cannot be judicially overthrown upon surmises and deductions but only upon clear evidence compelling adverse judicial conclusions. It is not at all controlling that this assessment does not prove out by any of the formulae which the experts who use them admit are merely helps in determination of value and not at all definite measurements thereof. However, whether the result reached by the Board is materially out of line according to some or any of the methods ordinarily used in estimating value, depends upon choice of various factors—such as percentage employed in capitalizing earnings and the period used to determine an average of annual earnings. Here, appellant contends for a 7% rate while there is evidence that a 4% rate would have been justified under conditions existing in 1933. Also, appellant [fol. 322] contends for a three year period for averaging earnings while there is evidence that a five year period is proper and usually employed and would be particularly applicable here as it would include peak expansion and peak depression years while a three year would unduly accentuate the depression years. While value is to be here determined as of a definite time, yet no wise investor would think of buying stock or securities of a railroad without giving

consideration to its history. The investor buys because of his estimate of the future but that estimate must include the experience of the reasonably near past.

Nor is it determinative that the 1933 assessment was identical with that of 1932. The evidence shows the business depression effective in 1932 and 1933; a decided improvement in stock and bond prices (generally and as to appellant) in 1933 prior to the assessment; and a slight reduction (.35% or $294,691) in the assessment of 1931 and a substantial reduction (5% or $4,149,973) in the 1932 assessment. It also appears that it is not unusual for the Board to use approximately the same amount for successive years* It may well be, in view of this situation, that the Board might honestly deem its reduction of 1932 to have sufficiently taken care of the effect on value of the depression covering 1932 and passing into 1933—especially in view of apparent improvement in conditions in 1933. So far as we are advised there was no contest of the 1932 assessment and we do not understand that the good faith of that assessment is here questioned.

Much learning has been expended by witnesses and by counsel concerning the merits of various methods of estimating system value and of allocation of State value therefrom and also as to the applicability of such methods of allocation to the situation here. This learning is valuable, but until we know what consideration was given by the Board to any or all of these methods the matter is academic in this case.

Also it is contended that earnings of appellant were "capitalized at an arbitrary and inadequate rate per cent." The contention is that the rate should have been 7%. Such was appellant's evidence but the witness for appellees de- [fol. 323] fended 4%. The evidence shows that this is a matter of opinion depending on various influencing considerations and that competent experts on the stand had considerable to say upon both sides of the dispute. While

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* The assessments for 1919 to 1933, both inclusive, being as follows: 1919, $86,603,330; 1920, $86,599,348; 1921, $82,267,096; 1922, $82,267,047; 1923, $82,267,047; 1924, $82,266,895; 1925, $82,266,353; 1926, $82,266,220; 1927, $82,266,387; 1928, $82,266,386; 1929, $83,294,677; 1930, $83,294,688; 1931, $82,999,997; 1932, $78,850,024; 1933, $78,832,888.

we might conclude (if we determined the matter) that 7% was the best rate, this evidence would far fail in establishing that the use of 6% (or even as low as 4%) instead of 7% was clear proof of arbitrary action by the Board. This matter is one of fact not properly subject to judicial review (L. & N. R. R. Co. v. Greene, 244 U. S. 522, 542).

It is contended that no stock and bond prices of 1932 or 1933 were considered and therefore the action of the Board was arbitrary. There is no evidence that such prices were not considered. The statement to that effect is based upon assumptions drawn from the fact that this assessment was identical with that of 1932.

It is contended that the valuation included non-operating assets not located in North Dakota. The witness for appellees testified:

"The State Tax Commissioner has used a composite method of assigning a value to the operating and to the non-operating property based upon two ratios; the relative book cost of operating and non-operating property is used as one percentage figure and the relative earnings from the two classes of assets for a period of years is used as the other percentage, the two percentages are averaged and the composite percentage is applied to the total stock and bond value and the resulting amount, for instance, as to non-operating property is deducted from the total stock and bond value."

This testimony, which was all upon this matter, would seem to meet this contention and show an effort by the Board to exclude all non-operating assets. Other testimony of the same witness makes clear that he had no knowledge of what the Board considered in connection with the 1933 assessment (made July, 1933) since he had terminated his connection with the Tax Commission in January, 1933. The just above quoted testimony must have referred to the time he was familiar with the affairs of the Board, which was several months before this assessment. So construed, there is no testimony as to what the Board did in 1933 about excluding or including non-operating property.

[fol. 324] Appellant argues that its true value has been more than doubled "by the use of the arbitrary and indefensible methods above referred to"—meaning that such doubled value would result:

"If the system value of $433,241,000 which formed the basis of the 1932 assessment (and therefore of the 1933 assessment also) were first reduced to $345,188,820 (the system value computed by Mr. Baker for 1933 in Exhibit P, T. 277), and if Mr. Baker's computation in Exhibit P (which fails by 25% to support the assessment) were corrected by capitalizing earnings for three years instead of five years, and at the rate of 7% instead of 6%; and if stock and bond prices for three years were used instead of five years and apportioned between railroad property and non-operating assets in proportion to their respective five years earnings instead of by the composite ratio reflecting relative investment, the system value through these corrections would be reduced to $204,417,740 instead of $433,241,000 which formed the basis of the state's assessment."

Of course, if it were shown that the true value of appellant's property were doubled in the assessment it would be a very significant and arresting fact. However, this result is reached only by assuming the verity of all the contributing factors just above quoted and all of them are subject to grave question, some of them are disputed in the evidence and others have no foundation in the evidence. We do not mean to say that an assessment might not be so grossly excessive, under all the circumstances shown by the evidence, that it would, if unexplained, be sufficient proof of fraud. There are cases, relied on by appellees, which seem to state that excessiveness, alone and for a single assessment, is not enough but that the fraud must be a consistent or systematic practice (Cumberland Coal Co. v. Board, 284 U. S. 23, 28-29; Chicago, G. W. Ry. v. Kendall, 266 U. S. 94, 96; Southern Ry. Co. v. Watts, 260 U. S. 519, 526). We hesitate to construe those and other like cases to mean that in no event can bare excessiveness constitute sufficient evidence of fraud to invalidate a particular and single assessment. We rather incline to the view that a bare showing of excessive assessment or of discrimination in assessments is not sufficient to prove fraud but that if such excessiveness or discrimination be so gross and glaring as, under all of the evidence, to challenge the conscience of the court, it may be found to be [fol. 325] invalid. Whether such construction of the law be accurate is not, however, of importance here because no such character of excess is shown. In this connection it

may be remarked that there was no increase in the 1933 assessment over that of 1932; that (while it is by no means conclusive of the accuracy of the 1933 assessment) it is worthy of notice that during the fourteen years preceding this assessment there was only one increase ($1,028,291), which was for the peak expansion year of 1929, while there were four reductions (totalling $12,459,916, of which $4,149,973 was in 1932) and that the average assessment for the four years just preceding 1933, measured by the five factor formula, is 99.07% of true value (1929 being 101.29, 1930 being 96.25, 1931 being 97.33 and 1932 being 101.40). This history rather suggests serious consideration and an endeavor by the Board to treat appellant fairly than arbitrary and unreasonable conduct.

The decree must be affirmed.

CONCURRING OPINION

SANBORN, Circuit Judge, concurring:

The power of the Federal Courts to enjoin the collection of State taxes upon the property of an interstate carrier has been so circumscribed, as pointed out by Judge Stone in his able opinion, that, although I have no doubt that the property of the appellant in North Dakota was overvalued for tax purposes in 1933, I concur in the conclusion reached in the opinion and the reasons assigned for it. I am not, however, in entire sympathy with the rule which seems to preclude any interference with such overassessments unless it clearly appears that they result from purely arbitrary action or from something akin to fraud. While death from an honest error of judgment may be preferable to death designedly caused, the effect upon the victim is the same. Overtaxation resulting from honest mistake or errors of judgment is as serious as that resulting from fraud, and constitutes just as unreasonable a burden upon interstate commerce. I regard state taxation of interstate carriers as a matter of national concern.

In this case the defendants' own expert states that no method of computation with which he is familiar would produce a value for 1933 equal to that fixed by the State Board. To that extent we have a different situation here than in the Rowley case. That the value of the portion

[fol. 326] of appellant's system in North Dakota in 1933, after the appellant had been through three years of depression, even approximated the values of 1928 and 1929 is to my mind inconceivable. Possibly I am substituting my judgment for that of the Board, but the Supreme Court in Atchison, Topeka & Santa Fe Railway Co. et al. v. United States et al., 284 U. S. 248, referred to a record made in a rate hearing in 1928 as pertaining to a "different economic era", and said (page 262):

"This is not the usual case of possible fluctuating conditions, but of a changed economic level." Certainly no group of men in 1933 were ready, able and willing to buy the appellant's system and who were clothed in their right minds, would have paid, as the result of fair negotiations, any such sum for the portion of the road in North Dakota as was fixed by the Board. So that, while I agree that the court below, upon this record, was justified in denying the injunction prayed for, I am suffering from no illusions with respect to the great changes which took place in the value of all railway properties between the years 1929 and 1933. It may be impossible now for the Federal Courts to grant any relief to interstate carriers from overtaxation possibly resulting from honest mistakes or errors of judgment on the part of the taxing authorities of those States through which their lines run, but I believe that if interstate commerce by rail continues to be unreasonably overburdened with state taxes, either Congress or the courts will find some way to protect it. In this connection, the opinions of Judge Webster in Northern Pac. Ry. Co. v. Adams County et al., (D. C. E. D. Wash.), 1 F. Supp. 163, and of Mr. Justice Brandies in Nashville, Chattanooga & St. Louis Ry. v. Walters et al., — U. S. —, opinion filed March 4, 1935, are of interest.

[fol. 327] IN UNITED STATES CIRCUIT COURT OF APPEALS, EIGHTH CIRCUIT

No. 10221

GREAT NORTHERN RAILWAY COMPANY, Appellant,

vs.

J. J. WEEKS, State Tax Commissioner, and Others Named as Appellees in the Citation

April 26, 1935.

DECREE

Appeal from the District Court of the United States for the District of North Dakota

This cause came on to be heard on the transcript of the record from the District Court of the United States for the District of North Dakota and was argued by counsel.

On consideration whereof, it is now here ordered, adjudged, and decreed by this Court, that the decree of the said District Court, in this cause be, and the same is hereby, affirmed with costs; and that J. J. Weeks, State Tax Commissioner, and others named as appellees in the citation, have and recover against the Great Northern Railway Company the sum of Twenty Dollars for their costs herein and have execution therefor.

[fols. 328-347] Petition for rehearing, covering 20 pages, filed May 9, 1935, omitted from this print. It was denied, and nothing more, by order of May 24, 1935.

[fol. 348] IN UNITED STATES CIRCUIT COURT OF APPEALS

ORDER DENYING PETITION FOR REHEARING—May 24, 1935

This cause came on this day to be heard upon the petition for a rehearing, filed by counsel for appellant.

On consideration whereof, it is now here ordered by this Court, that said petition for a rehearing of this cause, be, and the same is hereby, denied.

IN UNITED STATES CIRCUIT COURT OF APPEALS

MOTION FOR STAY OF ISSUANCE OF MANDATE—Filed May 27, 1935

Now comes the appellant, Great Northern Railway Company, and moves the court to enter an order withholding the mandate in this case because it is the bona fide intention of the appellant to make proper application to the Supreme Court of the United States for writ of certiorari in this case, and in support hereof appellant attaches the professional statement of its counsel, F. G. Dorety of St. Paul, Minnesota.

F. G. Dorety, C. J. Murphy, Counsel for Petitioner.

Dated this 27th day of May, 1935.

I hereby certify that it is the bona fide intention of appellant, Great Northern Railway Company, to make ap-
[fol. 349] plication to the Supreme Court of the United States for a writ of certiorari within the time limited by law and that I believe there is merit in its case and that the judgment of the United States Circuit Court of Appeals ought to be reversed by the Supreme Court of the United States.

F. G. Dorety.

Dated this 27th day of May, 1935.

[File endorsement omitted.]

IN UNITED STATES CIRCUIT COURT OF APPEALS

ORDER STAYING ISSUANCE OF MANDATE—May 27, 1935

Upon consideration of the motion of counsel for Great Northern Railway Company, appellant herein, for an order staying the mandate herein pending application to the Supreme Court of the United States for a writ of certiorari,

It is now here ordered that said motion be granted and that the mandate in this case be and the same is hereby stayed until and including the 5th day of July, 1935, provided that if within such stay there is filed with the Clerk of this Court the certificate of the Clerk of the Supreme Court that the certiorari petition, record and brief has been filed and proof of notice thereof under the rules of the Supreme Court, such stay shall continue until final disposition by the Supreme Court.

Dated this 27th day of May, 1935.

[fol. 350] Clerk's certificate to foregoing transcript omitted in printing.

[fol. 351] SUPREME COURT OF THE UNITED STATES

ORDER ALLOWING CERTIORARI—Filed October 14, 1935

The petition herein for a writ of certiorari to the United States Circuit Court of Appeals for the Eighth Circuit is granted. And it is further ordered that the duly certified copy of the transcript of the proceedings below which accompanied the petition shall be treated as though filed in response to such writ.

Endorsed on cover: File No. 39,732. U. S. Circuit Court of Appeals, Eighth Circuit. Term No. 178. Great Northern Railway Company, Petitioner, vs. J. J. Weeks, State Tax Commissioner, et al., etc. Petition for a writ of certiorari and exhibit thereto. Filed June 26, 1935. Term No. 178, O. T. 1935.